MoES Publications for 2021

	ACROSS	OSMART	PACER	SAGE	TOTAL
Total no. of Publications	315	133	94	52	**594**

ACROSS
(IITM+IMD+NCMRWF)

1. Acharya R., 2021, World Meteorological Organisation Voluntary Observing Ships scheme (VOS): An Overview, **Earth Science India**, 14, 1, 1-17
2. Agnihotri I., Punia M.P., Sharma J.R., 2021, Spatiotemporal Analysis of Maximum and Minimum Temperature within a Basin: A Case Study of West-Flowing River Basin of Kutch, Saurashtra and Marwar, India, **Journal of the Indian Society of Remote Sensing**, 49, DOI:10.1007/s12524-021-01340-7, 1779-1786
3. Ahmed R., Dhanger N., Dwivedi S., Giri R.K., Pithani P., Ghude S. D., 2021, Characteristics of fog in in relation to the Tropical cyclone intensity. A case study of IGI Airport New Delhi, **Tropical Cyclone Research and Review**, 10, DOI:10.1016/j.tcrr.2021.09.004, 170-181
4. Ahmed R., Mohapatra M., Dwivedi S., Giri R.K., 2021, Characteristics features of Super Cyclone 'AMPHAN'- Observed through Satellite Images, **Tropical Cyclone Research and Review**, 10, DOI:10.1016/j.tcrr.2021.03.003, 16-31
5. Akhter J., Mandal R., Chattopadhyay R., Joseph S., Dey Avijit, Nageswararao M.M., Pattanaik D.R., Sahai A.K., 2021, Kharif rice yield prediction over Gangetic West Bengal using IITM-IMD extended range forecast products, **Theoretical and Applied Climatology**, 145, DOI:10.1007/s00704-021-03679-w, 1089-1100
6. Amarjyothi K., Preveen Kumar D., Saikrishnan K.C., 2021, Identification and Tracking of Locust Swarms by Indian Doppler Weather Radar, **IEEE Geoscience and Remote Sensing Letters**, DOI:10.1109/LGRS.2021.3086587
7. Amat H.B., Pradhan M., Tejavath C.T., Dey Avijit, Rao Suryachandra A., Sahai A.K., Ashok K., 2021, Value addition to forecasting: towards Kharif rice crop predictability through local climate variations associated with Indo-Pacific climate drivers, **Theoretical and Applied Climatology**, 144, DOI:10.1007/s00704-021-03572-6, 917-929
8. Ambade B., Sankar T.K., Panicker A.S., Gautam A.S., Gautam Sneha, 2021, Characterization, seasonal variation, source apportionment and health risk assessment of black carbon over an urban region of East India, **Urban Climate**, 38: 100896, DOI:10.1016/j.uclim.2021.100896
9. Anand V., Korhale N., Tikle S., Rawat M.S., Beig G., 2021, Is meteorology a factor to COVID-19 spread in a tropical climate?, **Earth Systems and Environment**, 5, DOI:10.1007/s41748-021-00253-2, 939-948
10. Anandh T.S., Das B.K., Kuttippurath J., Chakraborty A., 2021, A comparative analysis of the Bay of Bengal Ocean state using standalone and coupled numerical models, **Asia-Pacific Journal of Atmospheric Sciences**, 57, DOI:10.1007/s13143-020-00197-z, 347-359
11. Anil Kumar V., Hazra A., Pandithurai G., Kulkarni G., Mohan G.M., Mukherjee Subrata, Leena P.P., Patil R.D., Prasad D.S.V.V.D., 2021, Atmospheric ice nucleating particle measurements and parameterization representative for Indian region, **Atmospheric Research**, 253: 105487, DOI:10.1016/j.atmosres.2021.105487, 1-9
12. Arora A., 2021, On the role of the Arabian Sea thermal variability in governing rainfall variability over the Western Ghats, **Journal of Earth System Science**, 130: 117, DOI:10.1007/s12040-021-01615-0, 1-13

13. Arulalan T., Kumar R.D., Rao K.A., Bonfils C.J.W., On the emergence of human influence on surface air temperature changes over India, **Journal of Geophysical Research Atmospheres**, 126, 1-12
14. Arushi P.V., Chakraborty A., Nanjundiah R.S., 2021, Recent weakening in MJO-related convective activity over the equatorial Indian Ocean and Maritime Continent, **Theoretical and Applied Climatology**, 143, DOI:10.1007/s00704-020-03423-w, 267-278

    Ashrit R., Kumar Sushant, Dube A., Arulalan T., Karunasagar S., Routray A., Mohandas S., George J.P., Mitra A.K., 2021, Tropical cyclone forecast using NCMRWF Global (12 Km) and regional (4 Km) models, **Mausam,** 72, 1, 129-146
15. Aslam M.Y., Mukherjee S., Anil Kumar V., Patil R.D., Patil S.S., Dudhambe S.D., Saha Sanjay Kumar, Pandithurai G., 2021, Seasonal characteristics of boundary layer over a high-altitude rural site in Western India: implications on dispersal of particulate matter, **Environmental Science and Pollution Research**, 28, https://doi.org/10.1007/s11356-021-13163-7, 35266-35277
16. Asutosh A., Fadnavis S., Nuncio M., Müller R., Tripathy S.C., 2021, The Arctic temperature response to global and regional anthropogenic sulfate aerosols, **Frontiers in Environmental Science**, 9:766538, DOI:0.3389/fenvs.2021.766538, 1-13
17. Ayantika D.C., Krishnan R., Singh M., Swapna P., Sandeep N., Prajeesh A.G., Vellore R., 2021, Understanding the combined effects of global warming and anthropogenic aerosol forcing on the South Asian monsoon, **Climate Dynamics**, 56, DOI:10.1007/s00382-020-05551-5, 1643-1662
18. Banik T., Thandlam V., De B.K., Kundu S.S., Gogoi R.B., Raju P.L.N., Guha A., 2021, Understanding dynamics of tropical cyclones in the Bay of Bengal using lightning data, **Meteorology and Atmospheric Physics,** 133, DOI:10.1007/s00703-021-00824-y, 1505–1522
19. Beig G., 2021, Clearing smog's particulate problem, **Nature Geoscience**, 14, DOI:10.1038/s41561-021-00687-3, 59-60
20. Beig G., Korhale N., Rathod A., Maji S., Sahu S.K., Dole S., Latha R., Murthy B.S., 2021, On modelling growing menace of household emissions under COVID-19 in Indian metros, **Environmental Pollution**, 272:115993, DOI:10.1016/j.envpol.2020.115993, 1-11
21. Beig G., Rathod Aditi, Tikle S., Maji Sujit, Sobhana S.B., 2021, Association of retreating monsoon and extreme air pollution in a megacity, **Journal of Environmental Sciences**, 106, DOI:0.1016/j.jes.2021.01.004, 97-104
22. Beig G., Sahu S.K., Anand V., Bano S., Maji S., Rathod A., Korhale N., Sobhana S.B., Parkhi N., Mangaraj P., Srinivas R., Peshin S.K., Singh S., Shinde R., Trimbake H.K., 2021, India's Maiden air quality forecasting framework for megacities of divergent environments: The SAFAR-project, **Environmental Modelling & Software**, 145: 105204, DOI:10.1016/j.envsoft.2021.105204, 1-20
23. Beig G., Sahu S.K., Rathod A., Tikle S., Singh V., Sandeepan B.S., 2021, Role of meteorological regime in mitigating biomass induced extreme air pollution events, **Urban Climate**, 35: 100756, DOI:10.1016/j.uclim.2020.100756, 1-9
24. Bera S., 2021, Droplet spectral dispersion by lateral mixing process in continental deep cumulus clouds, **Journal of Atmospheric and Solar Terrestrial Physics**, 214: 105550, DOI:10.1016/j.jastp.2021.105550, 1-9
25. Bhardwaj A., Misra V., Kirtman B., Asefa T., Maran C., Morris K., Carter E., Martinez C., Roberts D., 2021, Experimental high-resolution winter seasonal climate reforecasts for Florida, **Weather and Forecasting**, 36, 4, DOI:10.1175/WAF-D-21-0004.1, 1169-1182
26. Bhat M.A., Romshoo S.A., Beig G., 2021, Measurement and Modelling of Particulate Pollution over Kashmir Himalaya, India, **Water, Air, & Soil Pollution**, 232: 120, DOI:10.1007/s11270-021-05062-x, 1-22
27. Bhawar R.L., Fadnavis S., Vinay Kumar, Rahul P.R.C., Sinha T., Lolli S., 2021, Radiative impacts of aerosols during COVID-19 lockdown period over the Indian region, **Frontiers in**

Environmental Science, 9:746090, DOI:10.3389/fenvs.2021.746090, 1-11

28. Bibraj R., Ramachandra Rao K., Ganeswara Rao A., Ramana Ch., Sandepogu P., Saikrishnan K.C., 2021, Automatic Weather Radar Based Geo-Specific Severe-Weather Alerting System (R-Alert), **Mausam**, 72, 2, 291-300
29. Birthal P.S., Hazranaa J., Negi D.S., Bhan S.C., 2021, Climate change and land-use in Indian agriculture, **Land Use Policy**, 109, October, 2021.
30. Biswas M.S., Mahajan A.S., 2021, Year-long concurrent MAX-DOAS observations of nitrogen dioxide and formaldehyde at Pune: understanding diurnal and seasonal variation drivers, **Aerosol and Air Quality Research**, 21: 200524, DOI:10.4209/aaqr.200524, 1-22
31. Biswas M.S., Pandithurai G., Aslam M.Y., Patil R.D., Anilkumar V., Dudhambe S.D., Lerot C., De Smedt I., Van Roozendael M., Mahajan A.S., 2021, Effect of Boundary Layer Evolution on Nitrogen Dioxide (NO2) and Formaldehyde (HCHO) Concentrations at a High-altitude Observatory in Western India, **Aerosol and Air Quality Research**, 21: 200193, DOI:10.4209/aaqr.2020.05.0193, 1-21
32. Bondyopadhyay S., Mohapatra M., Sen Roy S., 2021, Determination of suitable thermodynamic indices and prediction of thunderstorm events for Kolkata, India, **Meteorology and Atmospheric Physics**, 133, DOI:10.1007/s00703-021-00813-1, 1367–1377
33. Budhavant K.B., Gawhane R.D., Rao P.S.P., Nair H.R.C.R., Safai P.D., 2021, Long-term increasing trends in the wet deposition of secondary inorganic constituents in SW Indian precipitation, **Air Quality Atmosphere and Health**, 14, DOI:10.1007/s11869-020-00970-z, 667-677
34. Bushair M.T., Indira Rani S., Jangid B.P., Sharma P., Kumar Sumit, George J.P., 2021, Evaluation of the benefits of assimilation of Meteosat-8 observations in an NWP system over the India, **Meteorology and Atmospheric Physics**, 133, DOI:10.1007%2Fs00703-021-00826-w, 1-22
35. Carpenter L.J., Chance R.J., Sherwen T., Adams T.J., Ball S.M., Evans M.J., Hepach H., Hollis L.D.J., Hughes C., Jickells T.D., Mahajan A., … et al., 2021, Marine iodine emissions in a changing world, **Proceedings of The Royal Society A-Mathematical Physical and Engineering Sciences**, 477: 20200824, DOI:10.1098/rspa.2020.0824, 1-17
36. Chakravarty K., Bhangale R., Das S., Yadav P., Kannan B.A.M., Pandithurai G., 2021, Unraveling the characteristics of precipitation microphysics in summer and winter monsoon over Mumbai and Chennai – the two urban-coastal cities of Indian sub-continent, **Atmospheric Research**, 249: 105313, DOI:10.1016/j.atmosres.2020.105313, 1-14
37. Chakraborty K., Valsala V., Bhattacharya T., Ghosh J., 2021, Seasonal cycle of surface ocean pCO2 and pH in the northern Indian Ocean and their controlling factors, **Progress in Oceanography**, 198: 102683, DOI:10.1016/j.pocean.2021.102683, 1-15
38. Chakravarty Kaustav, Arun N., Yadav P., Bhangale R., Murugavel P., Kanawade V.P., Mohmmad J., Hosalikar K.S., Pandithurai G., 2021, Characteristics of precipitation microphysics during Tropical Cyclone Nisarga (2020) as observed over the orographic region of Western Ghats in the Indian sub-continent, **Atmospheric Research**, 264: 105861, DOI:10.1016/j.atmosres.2021.105861, 1-10
39. Chakravarty Kaustav, Gayathridevi S., Mohmmad J., Hosalikar K.S., Pandithurai G., Niyogi D., 2021, First results from the Doppler Weather Radar observations over Mumbai urban region during the inter seasonal phases of 2018 monsoon, **Natural Hazards**, 107, DOI:10.1007/s11069-021-04637-5, 1413-1426

40. Chakravarty Kaustav, Khandar S., Kiran Kumar N.V.P., Bhangale R., Maitra A., 2021, The interseasonal features of precipitation microphysics over Thiruvananthapuram and Kolkata - the two tropical stations of Indian sub-continent, **Journal of Atmospheric and Solar Terrestrial Physics**, 222: 105710, DOI:10.1016/j.jastp.2021.105710, 1-11
41. Chakravarty Kaustav, Vincent V., Vellore R., Srivastava A.K., Rastogi R., Soni V.K., 2021, Revisiting Andhi in northern India: A case study of severe dust-storm over the urban megacity of New Delhi, **Urban Climate**, 37: 100825, DOI:10.1016/j.uclim.2021.100825, 1-11
42. Chakravorty S., Perez R.C., Gnanaseelan C., Anderson B.T., 2021, Revisiting the recharge and discharge processes for different flavors of El Niño, **Journal of Geophysical Research: Oceans**, 126: e2020JC017075, DOI:10.1029/2020JC017075, 1-15
43. Chaluvadi R., Varikoden H., Mujumdar M., Ingle S.T., 2021, Variability of West Pacific subtropical high and its potential importance to the Indian summer monsoon rainfall, **International Journal of Climatology**, 41, DOI:10.1002/joc.7057, 4047-4060
44. Chaluvadi R., Varikoden H., Mujumdar M., Ingle S.T., Kuttippurath J., 2021, Changes in large-scale circulation over the Indo-Pacific region and its association with 2018 Kerala extreme rainfall event, **Atmospheric Research**, 263: 105809, DOI:10.1016/j.atmosres.2021.105809, 1-12
45. Chandra S., Siingh D., Victor N.J. Kamra A.K., 2021, Lightning activity over South/Southeast Asia: Modulation by thermodynamics of lower atmosphere, **Atmospheric Research**, 250: 105378, DOI:10.1016/j.atmosres.2020.105378, 1-10
46. Chattopadhyay S., Ghosh S., Kayal A., 2021, An unusual hot summer in Kolkata in last 10 years and prediction of probability of discomfort applying numerical Method, **Mausam**, 72, 2, 463-472
47. Chavan P., Fadnavis S., Chakroborty T., Sioris C.E., Griessbach S., Müller R., 2021, The outflow of Asian biomass burning carbonaceous aerosol into the upper troposphere and lower stratosphere in spring: radiative effects seen in a global model, **Atmospheric Chemistry and Physics**, 21, DOI:10.5194/acp-21-14371-2021, 14371-14384
48. Chen Y., Beig G., Archer-Nicholls S., Drysdale W., Acton,W.J.F., Lowe D., Nelson B., Lee J., … et al., 2021, Avoiding high ozone pollution in Delhi, India, **Faraday Discussions**, 226, DOI: 10.1039/d0fd00079e, 502-514
49. Chowdhuri S., Iacobello G., Banerjee T., 2021, Visibility network analysis of large-scale intermittency in convective surface layer turbulence, **Journal of Fluid Mechanics**, 925: A38, DOI:10.1017/jfm.2021.720, 1-15
50. Chowdhuri S., Todekar K., Murugavel P., Karipot A., Prabhakaran Thara, 2021, Unravelling the turbulent structures of temperature variations during a gust front event: a case study, **Environmental Fluid Mechanics**, 21, DOI:10.1007/s10652-020-09769-z, 263-281
51. Chowdhuri S., Todekar K., Prabhakaran Thara, 2021, The characterization of turbulent heat and moisture transport during a gust-front event over the Indian peninsula, **Environmental Fluid Mechanics**, 21, DOI:10.1007/s10652-021-09802-9, 907-924
52. Chug S., Nath S., Srivastava K., Singh S.L., 2021, Recent advances in communication infrastructure of IMD for early warning system, **Mausam**, 72, 4, 935–946
53. Dakhore K.K., Rathod A.S., Kadam D.R., Shinde G.U., Kadam Y.E., Ghosh K., 2021, Prediction of Kharif cotton yield over Parbhani, Maharashtra: Combination of extended range forecast and DSSAT-CROPGRO-Cotton model, **Mausam**, 72, 3, 635-644
54. Dandi A.R., Pillai P.A., Chowdary J.S., Srinivas D., Srinivas G., Koteswara Rao K., Nageswararao M.M., 2021, Inter-annual variability and skill of tropical rainfall and SST in APCC seasonal forecast models, **Climate Dynamics**, 56, DOI:10.1007/s00382-020-05487-w, 439-456
55. Das Ananda Kumar, Sharma Arun, Joseph Sudhir, Srivastava Akhil, Pattanaik D.R., 2021, Comparative performance of HWRF model coupled with POM and HYCOM for tropical cyclones over North Indian Ocean, **Mausam**, 72, 1, 147-166

56. Das Subrata Kumar, Hazra A., Deshpande S.M., Murali Krishna U.V., Kolte Y.K., 2021, Investigation of cloud microphysical features during the passage of a tropical mesoscale convective system: Numerical simulations and X-Band radar observations, **Pure and Applied Geophysics**, 178, DOI:10.1007/s00024-020-02622-w, 185-204
57. Das Subrata Kumar, Joshi P.P., Kokitkar R.S., Krishna U.V.M., Tanti H.A., Phadake A.C., 2021, Detection and validation of cloud top height from scanning ka-band radar measurements using digital image processing technique, **IEEE Journal of Selected Topics in Applied Earth Observations and Remote Sensing**, 14, DOI:10.1109/JSTARS.2020.3042868, 1848-1856
58. Das Subrata Kumar, Thatte T., Uma K.N., Murali Krishna U.V., Saha Sanjoy Kumar, 2021, Characteristics of temperature inversion from radiosonde measurements in the Western Ghats region, **Atmospheric Research**, 250: 105391, DOI:10.1016/j.atmosres.2020.105391, 1-11
59. Dasari H.P., Desamsetti S., Langodan S., Viswanadhapalli Y., Hoteit I., 2021, Analysis of outdoor thermal discomfort over the Kingdom of Saudi Arabia, **GeoHealth**, 5, 6, DOI:10.1029/2020GH000370
60. Dasgupta P., Roxy M.K., Chattopadhyay R., Naidu V., Metya Abirlal, 2021, Interannual variability of the frequency of MJO phases and its association with two types of ENSO, **Scientific Reports**, 11: 11541, DOI:10.1038/s41598-021-91060-2, 1-15
61. Deb Burman P.K., Chakraborty S., El-Madany T.S., Ramasubramanian R., Gogoi N., Gnanamoorthy P., Murkute C., Nagarajan R., Karipot A., 2021, A comparative study of ecohydrologies of a tropical mangrove and a broadleaf deciduous forest using eddy covariance measurement, **Meteorology and Atmospheric Physics**, 134, DOI:10.1007/s00703-021-00840-y, 1-22
62. Deb Burmana P.K., Launiainen S., Mukherjee S., Chakraborty S., Gogoi N., Murkute C., Lohani P., Sarma D., Kumar K., 2021, Ecosystem-atmosphere carbon and water exchanges of subtropical evergreen and deciduous forests in India, **Forest Ecology and Management**, 495: 119371, DOI:10.1016/j.foreco.2021.119371, 1-14
63. Deepa J.S., Gnanaseelan C., 2021, The decadal sea level variability observed in the Indian Ocean tide gauge records and its association with global climate modes, **Global and Planetary Change**, 198: 103427, DOI:10.1016/j.gloplacha.2021.103427, 1-13
64. Deepa J.S., Gnanaseelan C., Parekh A., 2021, The sea level variability and its projections over the Indo-Pacifc Ocean in CMIP5 models, **Climate Dynamics**, 57, DOI:10.1007/s00382-021-05701-3, 173-193
65. Deo A.A., Ganer D.W., 2021, Decadal changes of cyclone tracks in the Bay of Bengal, **Mausam**, 72, 199-206
66. Deshpande M., Singh V.K., Ganadhi M.K., Roxy M.K., Emmanuel R., Kumar Umesh, 2021, Changing status of tropical cyclones over the north Indian Ocean, **Climate Dynamics**, 57, DOI:10.1007/s00382-021-05880-z, 3545-3567
67. Deshpande Medha, Kanase R., Krishna R.P.M., Tirkey S., Mukhopadhyay P., Prasad V.S., Johny C.J., Durai V.R., Devi S., Mohapatra M., 2021, Global Ensemble Forecast System (GEFS T1534) evaluation for tropical cyclone prediction over the North Indian Ocean, **Mausam**, 72, 119-128
68. Dhangar N.G., Lal D.M., Ghude S.D., Kulkarni R., Parde A.N., Pithani P., Niranjan K., Prasad D.S.V.V.D., Jena C., Sajjan V.S., Prabhakaran Thara, Karipot A.K., Jenamani R.K., Singh S., Rajeevan M., 2021, On the conditions for onset and development of fog over New Delhi: An observational study from the WiFEX, **Pure and Applied Geophysics**, 178, DOI:10.1007/s00024-021-02800-4, 3727-3746
69. Dixit S.A., Gupta A., Choudhary H., Singh A.K., Prabhakaran Thara, 2021, A new universal model for friction factor in smooth pipes, **Physics of Fluids**, 33: 035134, DOI:10.1063/5.0041342, 1-13

70. Dube Anumeha, Singh Harvir, Ashrit R., 2021, Heat waves in India during MAM 2019: verification of ensemble based probabilistic forecasts and impact of bias correction, **Atmospheric Research**, 251: 105421, DOI:10.1016/j.atmosres.2020.105421
71. Dutta S., Jagtap M., Balasubramaniam R., Kulkarni N., Danish M., Deshpande S., Satpute U., Sahai A.K., Wayal R., Bhagbat P., Nambier B., Kulkarni D., Bile L., Kamble P.V., AwateP., Ghosh K., Sawaisarje G.K., Khedikar S., Patil C., Alam O., 2021, A pilot study on assessing the effect of climate on the incidence of vector borne disease at Pune and Pimpri-Chinchwad area, Maharashtra, **Mausam**, 72, 399-414
72. Dutta U., Hazra A., Chaudhari H.S., Saha Subodh K., Pokhrel S., Shiu C.-J., Chen J.-P., 2021, Role of microphysics and convective autoconversion for the better simulation of tropical intraseasonal oscillations (MISO and MJO), **Journal of Advances in Modeling Earth Systems**, 13: e2021MS002540, DOI:10.1029/2021MS002540, 1-32
73. Emmanuel R., Deshpande M., Gandhi M.K., Ingle S.T., 2021, Genesis of severe cyclonic storm Mora in the presence of tropical waves over the North Indian Ocean, **Quarterly Journal of the Royal Meteorological Society**, 147, DOI:10.1002/qj.4113, 3017-3031
74. Eswaraiah S., Lee C., Lee W., Ha Kim Y., Niranjan Kumar K., Medineni V.R., 2021, Temperature tele-connection between the tropical and polar middle atmosphere in the Southern hemisphere during the 2010 minor sudden stratospheric warming, **Atmospheric Science Letters,** 22, 1, DOI:10.1002/asl.1010
75. Fadnavis S., Müller R., Chakraborty T., Sabin T.P., Laakso A., Rap A., Griessbach S., Vernier J.V., Tilmes S., 2021, The role of tropical volcanic eruptions in exacerbating Indian droughts, **Scientific Reports**, 11: 2714, DOI:10.1038/s41598-021-81566-0, 1-13
76. Fadnavis S., Sabin T.P., Rap A., Müller R., Kubin A., Heinold B., 2021, The impact of COVID-19 lockdown measures on the Indian summer monsoon, **Environmental Research Letters**, 16: 074054, DOI: 10.1088/1748-9326/ac109c, 1-13
77. Fadnavis S., Sioris C.E., Wagh N., Chattopadhyay R., Tao M., Chavan P., Chakraborty T., 2021, A rising trend of double tropopauses over South Asia in a warming environment: implications for moistening of the lower stratosphere, **International Journal of Climatology**, 41, DOI:10.1002/joc.6677, E200-E215
78. Fazli H., Janbaz A.A., Rabbaniha M., Khedmati K., Chaudhari H.S., 2021, Study of environmental and three kilka species regime shifts in the Caspian Sea, **Iranian Journal of Fisheries Sciences**, 20, 1247-1261
79. Francis T., Jayakumar A., Sethunadh J., Mohandas S., Kumar Sumit, Rajagopal E.N., 2021, Dust induced radiative perturbations during an episode of long-range dust transport over Delhi, India: a high-resolution regional NWP model study, **Meteorology and Atmospheric Physics,** 133, 441–465
80. Ganai M., Tirkey S., Krishna R.P.M., Mukhopadhyay P., 2021, The impact of modified rate of precipitation conversion parameter in the convective parameterization scheme of operational weather forecast model (GFS T1534) over Indian summer monsoon region, Atmospheric Research, 248: 105185, DOI:10.1016/j.atmosres.2020.105185, 1-16
81. Ganesh S.S., Abhilash S., Joseph S., Manpreet Kaur, Dey A., Mandal Raju., Phani R., Chattopadhyay R., Pattanaik D.R., Sahai A.K., 2021, A review of the development and implementation of a tropical cyclone prediction system for North Indian Ocean in a multi-model ensemble framework, **Mausam**, 72, 57-76
82. Gautam A.S., Dilwaliya N.K., Srivastava A., Kumar S., Bauddh K., Siingh D., Shah M.A., Singh K., Gautam S., 2021, Temporary reduction in air pollution due to anthropogenic activity switch-off during COVID-19 lockdown in northern parts of India, **Environment, Development and Sustainability**, 23, DOI:10.1007/s10668-020-00994-6, 8774-8797
83. Geetha B., Balachandran S., 2021, Diagnostic analysis of two dos-à-dos extreme northeast monsoon seasons with dipolar rainfall performance, **Theoretical and Applied Climatology**, 144, DOI:10.1007/s00704-021-03528-w, 675–690

84. Gnanamoorthy P., Song Q., Zhao J., Zhang Y., Liu Y., Zhou W., Sha L., Zexin Fan, Deb Burman P.K., 2021, Altered albedo dominates the radiative forcing changes in a subtropical forest following an extreme snow event, **Global Change Biology**, 27, DOI:10.1111/gcb.15885, 6192-6205
85. Gohain G.B., Singh K.K., Singh R.S., Dakhore R.S., Ghosh K., 2021 Application of CERES-sorghum crop simulation model DSSAT v4.7 for determining crop water stress in crop phenological stages, **Modeling Earth Systems and Environment,** DOI:10.1007/s40808-021-01194-5
86. Gopalakrishnan V., Pawar S.D., Domkawale M.A. , Charging processes during the dissipation stage of thunderstorms, Meteorology and Atmospheric Physics, 133, June 2021, DOI:10.1007/s00703-020-00755-0, 467-478
87. Grabowski W.W., Thomas L., 2021, Cloud droplet diffusional growth in homogeneous isotropic turbulence: bin microphysics versus Lagrangian super-droplet simulations, **Atmospheric Chemistry and Physics**, 21, DOI: 10.5194/acp-21-4059-2021, 4059–4077
88. Gubbala C.S., Dodla V.B.R., Desamsetti S., 2021, Assessment of wind energy potential over India using high-resolution global reanalysis data, **Journal of Earth System Science**, 130, 64, DOI:10.1007/s12040-021-01557-7
89. Guhathakurta P., Wagh N., 2021, Climate changes impact on southwest monsoon rainfall pattern over river Basins of India, **IWRA (India) Journal**, 10, 1, 26-32
90. Gupta S., Upadhayaya A.K., Siingh D., 2021, Ionospheric response to sudden stratospheric warming events across longitudes during solar cycle 24, **Journal of Geophysical Research: Space Physics**, 126: e2021JA029206, DOI:10.1029/2021JA029206, 1-21
91. Gupta Smrati, Tiwari Y.K., Revadekar J.V., Deb Burman P.K., Chakraborty S., Gnanamoorthy P., 2021, An intensification of atmospheric CO2 concentrations due to the surface temperature extremes in India, **Meteorology and Atmospheric Physics**, 133, DOI:10.1007/s00703-021-00834-w, 1647-1659
92. Halder M., Kanase R., Mukhopadhyay P., Halder S., Pawar S.D., Domkawle M., Pandey A.C., 2021, Latest approaches to thunderstorm/lightning and severe weather forecasting using high resolution numerical model, **Vayumandal**, 47, 42-52
93. Halder S., Parekh A., Chowdary J.S., Gnanaseelan C., Kulkarni Ashwini, Assessment of CMIP6 models skill for tropical Indian Ocean sea surface temperature variability, **International Journal of Climatology**, 41, March 2021, DOI:10.1002/joc.6975, 1-21
94. Halder Santanu., Tiwari Y.K., Valsala V., Sreeush M.G., Sijikumar S., Janardanan R., Maksyutov S., 2021, Quantification of enhancement in atmospheric CO2 background due to Indian biospheric fluxes and fossil fuel emissions, **Journal of Geophysical Research: Atmospheres**, 126: e2021JD034545, DOI:10.1029/2021JD034545, 1-20
95. Hamza F., Anju M., Valsala V., Smitha B.R., 2021, A bioenergetics model for seasonal growth of Indian oil sardine (Sardinella longiceps) in the Indian west coast, **Ecological Modelling**, 456: 109661, DOI:10.1016/j.ecolmodel.2021.109661
96. Hamza F., Valsala V., Mallissery A., George G., 2021, Climate impacts on the landings of Indian oil sardine over the south-eastern Arabian Sea, Fish and Fisheries, 22, DOI: 10.1111/faf.12513, 175-193
97. Hari Prasad K.B.R.R., Ramu D.A., Rao Suryachandra A., Hameed S.N., Samanta D., Srivastava Ankur, 2021, Reducing systematic biases over the Indian region in CFS V2 by dynamical downscaling, **Earth and Space Science**, 8: e2020EA001507, DOI:10.1029/2020EA001507, 1-19
98. Hashmi F., Sreevathsa M.N.R., 2021, Comparison of JULES simulated soil moisture over Indian region, **Mausam**, 72, 2, 415-424

99. Hazra V., Pattnaik S., De S., Vishwakarma V., 2021, Segregation of forecast errors in the planetary boundary layer parameterization over the state of Odisha and neighboring regions in India during summer monsoon season, **Pure and Applied Geophysics**, 178, DOI:10.1007/s00024-020-02651-5, 583-601
100. Hoteit I., Abualnaja Y., Afzal S., Ait-El-Fquih B., Akylas T., Antony C., Dawson C., Asfahani K., Brewin R.J., Cavaleri L., Cerovecki I., Cornuelle B., Desamsetti S., Attada R., Dasari H., … et al., 2021, Towards an End-to-End Analysis and Prediction System for Weather, Climate, and Marine Applications in the Red Sea, **Bulletin of the American Meteorological Society**, 102, 1, DOI:10.1175/BAMS-D-19-0005.1, E99-E122
101. Hrudya P.H., Varikoden H., Vishnu R., 2021, A review on the Indian summer monsoon rainfall, variability and its association with ENSO and IOD, Meteorology and Atmospheric Physics, 133, DOI:10.1007/s00703-020-00734-5, 1-14
102. Hrudya P.H., Varikoden H., Vishnu R., 2021, Regional variabilities of rainfall and convective parameters during the summer monsoon period: their linkage with El Niño Southern Oscillation, **Meteorology and Atmospheric Physics**, 133, DOI:10.1007/s00703-021-00802-4, 1223-1232
103. Hrudya P.P.V.H., Varikoden H., Vishnu R.N., 2021, Changes in the relationship between Indian Ocean dipole and Indian summer monsoon rainfall in early and recent multidecadal epochs during different phases of monsoon, **International Journal of Climatology**, 41, DOI:10.1002/joc.6685, E305-E318
104. Hulswar S., Prajakta Mohite, Soni V.K., 2021, Mahajan A.S., Differences between in-situ ozonesonde observations and satellite retrieved ozone vertical profiles across Antarctica, **Polar Science**, 30, DOI:10.1016/j.polar.2021.100688, 1-13
105. Indira Rani S., Arulalan T., George J.P., Rajagopal E.N., Renshaw R., Maycock A., Barker D., Rajeevan M., 2021, IMDAA: A high resolution satellite-era reanalysis for the Indian Monsoon Region, **Journal of Climate**, 34, 12, 5109-5133
106. Indira Rani S., Sharma Priti, George J.P., Das Gupta M., 2021, Assimilation of individual components of radiosonde winds: an investigation to assess the impact of single-component winds from space-borne measurement on NWP, **Journal of Earth System Science,** 130, 89, DOI:10.1007/s12040-021-01604-3
107. Jamshadali V.H., Reji M.J.K., Varikoden H., Vishnu R., 2021, Spatial variability of south Asian summer monsoon extreme rainfall events and their association with global climate indices, **Journal of Atmospheric and Solar Terrestrial Physics**, 221: 105708, DOI:10.1016/j.jastp.2021.105708, 1-14
108. Jayakumar A., Mohandas S., George J.P., Mitra A.K., Rajagopal E.N., 2021, Impact of locally modified cloud microphysics over Tibetan plateau on the Indian Summer Monsoon, **Journal of Earth System Science**, 130, 129, DOI:10.1007/s12040-021-01631-0
109. Jena C., Ghude S.D., Kumar Rajesh, Debnath S., Govardhan G., Soni V.K., Kulkarni S.H., Beig G., Nanjundiah R.S., Rajeevan M., 2021, Performance of high resolution (400 m) PM2.5 forecast over Delhi, **Scientific Reports**, 11: 4104, DOI:10.1038/s41598-021-83467-8, 1-9
110. Jena C., Ghude S.D., Kumar Rajesh, Debnath S., Govardhan G., Soni V.K., Kulkarni S.H., Beig G., Nanjundiah R.S., Rajeevan M., 2021, Performance of high resolution (400 m) PM2.5 forecast over Delhi, **Scientific Reports**, 11: 4104, DOI:10.1038/s41598-021-83467-8, 1-9
111. Jorge T., Brunamonti S., Poltera Y., Wienhold F.G., Luo B.P., Oelsner P., Hanumanthu S., Singh B.B., Körner S., Dirksen R., Naja M., Fadnavis S., Peter T., 2021, Understanding balloon-borne frost point hygrometer measurements after contamination by mixed-phase clouds, **Atmospheric Measurement Techniques**, 14, DOI:10.5194/amt-14-239-2021, 239-268

112. Joseph J., Girishkumar M.S., Varikoden H., Thangaprakash V.P., Shivaprasad S., Rama Rao E.P., 2021, Observed sub-daily variability of latent and sensible heat fluxes in the Bay of Bengal during the summer, **Climate Dynamics**, 56, DOI:10.1007/s00382-020-05512-y, 917-934
113. Joshi M.K., Abid M.A., Kucharski F., 2021, The Role of an Indian Ocean Heating Dipole in the ENSO Teleconnection to the North Atlantic European Region in Early Winter during the Twentieth Century in Reanalysis and CMIP5 Simulations, **Journal of Climate**, 34, DOI: 10.1175/JCLI-D-20-0269.1, 1047-1060
114. Kaginalkar A., Ghude S., Mohanty U.C., Mujumdar Pradeep, …, Attri S.D., Niyogi D., 2021, Integrated urban environmental system of systems for weather ready cities in India, **Bulletin of the American Meteorological Society**, DOI:10.1175/BAMS-D-20-0279.1
115. Kalbande R., Bano S., Beig G., 2021, Benzene and Toluene from Stubble Burning and Their Implications for Ozone Chemistry and Human Health in the Indo-Gangetic Plain Region, **ACS Earth and Space Chemistry**, 5, DOI:10.1021/acsearthspacechem.1c00283, 3226-3233
116. Kalshetti M., Chattopadhyay R., Phani R., Joseph S., Sahai A.K., 2021, Climatological patterns of subseasonal eddy flux transfer based on the co-spectral analysis over the Indian region and the derivation of an index of eddy transfer for operational tracking, International Journal of Climatology, 41, DOI:10.1002/joc.6821, E1906-E1925
117. Kamra A.K., Ramesh Kumar P., 2021, Regional variability in lightning activity over South Asia, **International Journal of Climatology**, 41, DOI:10.1002/joc.6641, 625-646
118. Kant S., Panda J., Rao Prakash, Sarangi C., Ghude S.D., 2021, Study of aerosol-cloud-precipitation-meteorology interaction during a distinct weather event over the Indian region using WRF-Chem, **Atmospheric Research**, 247: 105144, DOI:10.1016/j.atmosres.2020.105144, 1-15
119. Karmakar Ananya, Parekh A., Chowdary J.S., Gnanaseelan C., 2021, Influence of multi-mission chlorophyll-a data on the simulation of upper ocean thermal structure in the eastern Pacific Ocean, **International Journal of Remote Sensing**, 42, DOI:10.1080/2150704X.2021.1875146, 3445-3455
120. Kashyapi A., Shripad V.K., 2021, Cyclonic storms and Depressions over the north Indian Ocean during 2020, **Mausam**, 72, 3, 531-544
121. Khan A.W., Mahesh C., Bushair M.T., Gairola R.M., 2021, Estimation and evaluation of rainfall from INSAT-3D improved IMSRA algorithm during 2018 summer monsoon season, **Journal of Earth System Science**, 130, 37, DOI:10.1007/s12040-020-01543-3, 1-9
122. Konwar M., Prabhakaran Thara, Khain A., Pinsky M., 2021, Cloud microphysical structure analysis based on high-resolution insitu measurements, **Journal of the Atmospheric Sciences**, 78, DOI:10.1175/JAS-D-20-0229.1, 2265–2285
123. Kotal S.D., Bhattacharya S.K., 2021, Evolution of tropical cyclone forecasts of dynamical - Statistical Cyclone Prediction System (CPS) over the North Indian Ocean during the decade (2010-2019), **Mausam**, 72, 1, 87-106
124. Krishna U.V.M., Das Subrata Kumar, Sulochana E.G., Bhowmik U., Deshpande S.M., Pandithurai G., 2021, Statistical characteristics of raindrop size distribution over the Western Ghats of India: wet versus dry spells of the Indian summer monsoon, **Atmospheric Chemistry and Physics**, 21, DOI:10.5194/acp-21-4741-2021, 4741–4757
125. Kumar Amit, Giri R.K., Taloor A.K., Singh A.K., 2021, Rainfall trend, variability and changes over the state of Punjab, India 1981-2020: A geospatial approach, **Remote Sensing Applications: Society and Environment**, 23, DOI:10.1016/j.rsase.2021.100595, 10059-10059
126. Kumar Amit, Singh Anil Kumar, Giri R.K., Tripathi J.N., 2021, Inundation mapping using SENTINEL-1 data in the aftermath of super cyclone Amphan: A case study, **Mausam**, 72, 1, 253-264
127. Kumar Amit, Singh Anil Kumar, Tripathi J., Sateesh M., Singh V., 2021, Evaluation of INSAT-3D derived Hydro-Estimator and INSAT Multi-Spectral Rain Algorithm over Tropical Cyclones, Journal **of the Indian Society of Remote Sensing**, 49: 7051, DOI:10.1007/s12524-021-01332-7

128. Kumar Ashish, Hakkima H., Ghude S.D., Sinha V., 2021, Probing wintertime air pollution sources in the Indo-Gangetic Plain through 52 hydrocarbons measured rarely at Delhi & Mohali, **Science of the Total Environment**, 801: 149711, DOI:10.1016/j.scitotenv.2021.149711, 1-15
129. Kumar Bipin, Chattopadhyay R., Singh M., Chaudhari N., Kodari K., Barve A., 2021, Deep learning-based downscaling of summer monsoon rainfall data over Indian region, **Theoretical and Applied Climatology**, 143, DOI:10.1007/s00704-020-03489-6, 1145-1156
130. Kumar Bipin, Ranjan R., Yau M-K, Bera Sudarsan, Rao Suryachadra A., 2021, Impact of high- and low-vorticity turbulence on cloud–environment mixing and cloud microphysics processes, **Atmospheric Chemistry and Physics**, 21, DOI:10.5194/acp-21-12317-2021, 12317-12329
131. Kumar Bipin, Rehme M., Suresh N., Cherukuru N., Stanislaw J., Li S., Pearse S., Scheitlin T., Rao Suryachandra A., Nanjundiah R.S., 2021, Optimization of DNS code and visualization of entrainment and mixing phenomena at cloud edges, **Parallel Computing**, 107:102811, DOI:10.1016/j.parco.2021.102811
132. Kumar Dinesh, Agarwal Vidhu, Tiwari Akhilesh, Srivastava Kuldeep, Investigation of atmospheric water vapour condensation and characteristic analysis as potable water, **International Journal of Environmental Science and Technology**, DOI: 10.21203/rs.3.rs-361780/v1, 1-16
133. Kumar N., Mohapatra M., Dimri A.P., Anand M., 2021, Spatial and temporal variation in daily precipitation indices over Western Himalayas, **Journal of Earth System Science**, 130: 151. DOI:10.1007/s12040-021-01647-6
134. Kumar Ravi Ranjan, Vankayalapati K.R., Soni V.K., Dasari H.P., Jain M.K., Tiwari Arpit, Giri R.K., Desamsetti S., 2021, Comparison of INSAT-3D retrieved total column ozone with ground-based and AIRS observations over India, **Science of the Total Environment**, 793: 148518. DOI:10.1016/j.scitotenv.2021.148518
135. Kumar Siddharth, Phani R., Mukhopadhyay P., Balaji C., 2021, An assessment of radiative flux biases in the climate forecast system model CFSv2, **Climate Dynamics**, 56, DOI:10.1007/s00382-020-05546-2, 1541-1569
136. Kumar Sunil, Singh A., Srivastava Atul K., Sahu S.K., Hooda R.K., Dumka U.C., Pathak V., 2021, Long-term change in aerosol characteristics over Indo-Gangetic Basin: How significant is the impact of emerging anthropogenic activities?, **Urban Climate**, 38: 100880, DOI:10.1016/j.uclim.2021.100880, 1-16
137. Kumar Vinay, Sunilkumar K., Sinha T., 2021, Proportional trends of continuous rainfall in Indian summer monsoon, **Remote Sensing**, 13: 398, DOI:10.3390/rs13030398, 1-21
138. Kuttippurath J., Murasingh S., Stott P.A., Sarojini B.B., Jha M.K., Kumar P., Nair P.J., Varikoden H., Raj S., Francis P.A., Pandey P.C., 2021, Observed rainfall changes in the past century (1901-2019) over the wettest place on earth, **Environmental Research Letters**, 16: 024018, DOI:10.1088/1748-9326/abcf78, 1-15
139. Lalchandani V., Kumar V., Tobler A., Thamban N.M., Mishra S., Slowik J.G., Bhattu D., Rai P., Satish R., Ganguly D., Tiwari Suresh, Rastogi N., … et al., 2021, Real-time characterization and source apportionment of fine particulate matter in the Delhi megacity area during late winter, **Science of the Total Environment**, 770: 145324, DOI:10.1016/j.scitotenv.2021.145324 , 1-17
140. Latha R., Murthy B.S., Sandeepan B.S., Bhanage V., Rathod Aditi, Tiwari Arpit, Beig G., Singh S., 2021, Propagation of cloud base to higher levels during Covid-19-Lockdown, **Science of the Total Environment**, 759:144299, DOI:10.1016/j.scitotenv.2020.144299, 1-9
141. Lathika N., Rahaman W., Tarique M., Gandhi N., Kumar A., Thambana M., 2021, Deep water circulation in the Arabian Sea during the last glacial cycle: Implications for paleo-redox condition, carbon sink and atmospheric CO2 variability, **Quaternary Science Reviews**, 257: 106853, DOI:10.1016/j.quascirev.2021.106853, 1-16

142. Leena P.P., Sravanthi N., Anil Kumar V., Pandithurai G., Panicker A.S., 2021, Aerosol–Cloud–Rainfall Properties Inferred from Satellite Observations Over Different Regions of the Indian Subcontinent: Variability, Trends and Relationships During the Summer Monsoon, **Pure and Applied Geophysics**, 178, DOI:10.1007/s00024-021-02892-y, 4619–4631
143. Leena P.P., Varghese M., Anil kumar V., Basheer A.I., Pandithurai G., 2021, Droplet characteristics in monsoon clouds before rain as observed over a high altitude site in Western Ghats, India, **Journal of Atmospheric and Solar Terrestrial Physics**, 221: 105709, DOI:10.1016/j.jastp.2021.105709, 1-9
144. Li Q., Badia A., Fernandez R.P., Mahajan A.S., López-Noreña A.I., Zhang Y., Wang S., Puliafito E., Cuevas C.A., Saiz-Lopez A., 2021, Chemical interactions between ship-originated air pollutants and ocean-emitted halogens, **Journal of Geophysical Research: Atmospheres**, 126: ee2020JD034175, DOI:10.1029/2020JD034175, 1-17
145. Luis A.J., Tomar K.S., Prasad A., 2021, Hydrodynamics of the choke point between Cape Town and Antarctica during 2019, **Deep-Sea Research- part I,** 167: 103424, DOI:10.1016/j.dsr.2020.103424

146. Mahajan A.S., Li Q., Inamdar Swaleha, Ram K., Badia A., Saiz-Lopez A., 2021, Modelling the impacts of iodine chemistry on the northern Indian Ocean marine boundary layer, **Atmospheric Chemistry and Physics**, 21, DOI:10.5194/acp-21-8437-2021, 8437-8454
147. Mahala B.K., Mohanty P.K., Xalxo K.L., Routray A., Mishra Satya K., 2021, Impact of WRF parameterization schemes on track and intensity of extremely severe cyclonic storm “Fani”, **Pure and Applied Geophysics**, 178, 245-268
148. Mahapatra S., 2021, Innovating Extension of “Almost Pythagorean Triples” in Prime Numbers and Possible Uses in Science, **International Journal of Science and Research**, 10, DOI:10.21275/SR21220172453, 1230-1234
149. Mahendra N., Chowdary J.S., Patekar D., Sunitha P., Parekh A., Gnanaseelan C., 2021, Interdecadal modulation of interannual ENSO-Indian summer monsoon rainfall teleconnections in observations and CMIP6 models: Regional patterns, **International Journal of Climatology**, 41, DOI:10.1002/joc.6973, 2528-2552
150. Maji S., Yadav R., Beig G., Gunthe S.S., Ojha N., 2021, On the processes governing the variability of PTR-MS based VOCs and OVOCs in different seasons of a year over hillocky mega city of India, **Atmospheric Research**, 261: 105736, DOI:10.1016/j.atmosres.2021.105736, 1-13
151. Maksyutov S., Oda T., Saito M., Janardanan R., Belikov D., Kaiser J.W., Zhuravlev R., Ganshin A., Valsala V.K., … et al., 2021, Technical note: A high-resolution inverse modelling technique for estimating surface CO2 fluxes based on the NIES-TM–FLEXPART coupled transport model and its adjoint, **Atmospheric Chemistry and Physics**, 21, DOI:10.5194/acp-21-1245-2021, 1245–1266
152. Malap N., Prabhakaran Thara, Karipot A., 2021, Impact of middle atmospheric humidity on boundary layer turbulence and clouds, **Journal of Atmospheric and Solar Terrestrial Physics**, 215: 105553, DOI: 10.1016/j.jastp.2021.105553, 1-14
153. Marathe S., Terray P., Karumuri A., 2021, Tropical Indian Ocean and ENSO relationships in a changed climate, **Climate Dynamics**, 56, DOI:10.1007/s00382-021-05641-y, 3255-3276
154. Marsigli C., Ebert E., Ashrit R., Casati B., Chen J., Coelho Caio A.S., Dorninger M., Gillleland E., Haiden T., Landman S., Mittermaier M., 2021, Review article: observations for high-impact weather and their use in verification, **Natural Hazards and Earth System Sciences**, 21, 1297-1312
155. Mathew T.A., Malap N., Manoj M.G., Jayarao Y., Todekar K., Rakesh V., Rebello R., Mohankumar K., Prabhakaran Thara, 2021, Pre-monsoon convective events and thermodynamic features of southwest monsoon onset over Kerala, India – A case study, **Atmospheric Research**,

248: 105218, DOI:10.1016/j.atmosres.2020.105218, 1-12

156. Meena G.S., Mukherjee Subrata, Buchunde P., Safai P.D., Singla Vyoma, Aslam M.Y., Sonbawne S.M., Made Raju, Anand V., Dani K.K., Pandithurai G., 2021, Seasonal variability and source apportionment of black carbon over a rural high-altitude and an urban site in western India, **Atmospheric Pollution Research**, 12, DOI:10.1016/j.apr.2020.10.006, 32-45
157. Meer M.S., Mishra A.K., Rafiq M., 2021, Spatio-temporal Patterns of Land Use Land Cover Changes over a District in Northern India and their Impact on Environment and Society, **Journal of Geological Society of India**, 97, DOI:10.1007/s12594-021-1741-z, 656-660
158. Metya Abirlal, Chakraborty S., Bhattacharya S.K., Datye Amey, Deb Burman P.K., Dasgupta P., Sarma D., Gogoi N., Bora A., 2021, Isotopic and concentration analyses of CO2 and CH4 in association with the eddy-covariance based measurements in a tropical forest of northeast India, **Earth and Space Science**, 8: e2020EA001504, DOI:10.1029/2020EA001504, 1-15
159. Metya Abirlal, Datye Amey, Chakraborty Supriyo, Tiwari Y.K., Sarma D., Bora A., Gogoi N., 2021, Diurnal and seasonal variability of CO2 and CH4 concentration in a semi-urban environment of western India, **Scientific Reports**, 11: 2931, DOI:10.1038/s41598-021-82321-1, 1-13
160. Mishra A.K., Meer M.S., 2021, GIS approach for mapping novel coronavirus in northern state of India, Jammu and Kashmir, **Environmental Earth Sciences**, 80, DOI:10.1007/s12665-021-09856-4, 1-7
161. Mishra K., Sharma M., Mohapatra M., 2021, Performance of numerical weather prediction models in predicting track of recurving cyclone Vayu over Arabian Sea during June 2019, **Journal of Earth System Science**, 130, DOI:10.1007/s12040-021-01583-5
162. Mohan G.M., Vani K.G., Hazra A., Mallick C., Chaudhari H.S., Pokhrel S., Pawar S.D., Konwar M., Saha Subodh K., Das S.K., Deshpande S., Ghude S., Barth M.C., Rao Suryachandra A., Nanjundiah R.S., Rajeevan M., 2021, Evaluating different lightning parameterization schemes to simulate lightning flash counts over Maharashtra, India, **Atmospheric Research**, 255: 105532, DOI:10.1016/j.atmosres.2021.105532, 1-22
163. Mohan T.S., Niranjan Kumar K., Madhulatha A., Rajivan M., 2021, Intriguing aspects of rainfall initiation over rainshadow region during boreal summer monsoon, **Atmospheric Research**, 261, DOI: 10.1016/j.atmosres.2021.105746
164. Mohanty M.R., Pradhan M., Maurya R.K.S., Rao Suryachandra A., Mohanty U.C., Landu K., 2021, Evaluation of state-of-the-art GCMs in simulating Indian summer monsoon rainfall, **Meteorology and Atmospheric Physics**, 133, DOI:10.1007/s00703-021-00818-w, 1429-1445
165. Mohapatra M., Kumar, N., Mishra, K., S. Devi, 2021, Evaluation of heavy rainfall warnings of India National Weather Forecasting Service for monsoon season (2002–2018), **Journal of Earth System Science**,130, DOI:10.1007/s12040-020-01549-z
166. Mohapatra M., Mitra A.K., Singh Virendra, Mukherjee S.K, Navria K., Prashar V., Tyagi A., Verma A.K., Sunitha Devi, Prasad V.S., Raj Kumar M.R., 2021, INSAT-3DR rapid scan operations for weather monitoring over India: A new initiative at IMD, **Current Science**, 120, 1026-1034
167. Mohapatra M., Sharma M., 2021, Comparative analysis of vital parameters of extremely severe cyclonic storms Phailin & Hudhud over the Bay of Bengal, **Journal of Earth System Science**, 130: 233, DOI: 10.1007/s12040-021-01719-7
168. Mohapatra M., Sharma M., Kumar S.V.J., Devi S.S., Sabade B.S., 2021, Frequency of Genesis And and fall of Different Categories of Tropical Cyclones Over the North Indian Ocean, **Mausam**, 72, 1, 1-26

169. Mohapatra S., Gnanaseelan C., 2021, A new mode of decadal variability in the Tropical Indian Ocean subsurface temperature and its association with shallow meridional overturning circulation, **Global and Planetary Change**, 207: 103656, DOI:10.1016/j.gloplacha.2021.103656, 1-10
170. Momin I.M., Karmakar A., Gupta Ankur, Mitra A.K., 2021, Tropical Cyclone Heat Potential (TCHP) from the NCMRWF NEMO based Global Ocean Analysis and Forecast System, **Mausam,** Sp. issue: Tropical Cyclone, 72, 1, 207-214
171. Momin I.M., Mitra A.K., Bhatla R., 2021, Assessment of NEMO simulated surface current with HF radar along Andhra Pradesh coast, **Journal of Earth System Science,** 130: 69, DOI:10.1007/s12040-021-01553-X
172. Mor V., Dhankhar R., Attri S.D., 2021, Variability in Aerosols Properties and Sources Over Rohtak, India, **Mausam**, 72, 2, 373-386
173. Móring A., Hooda S., Raghuram N., Adhya T.K., Ahmad A., Bandyopadhyay S.K., Barsby T., Beig G., Bentley A.R., Bhatia A., Dragosits U., Drewer J., Foulkes John, Ghude S.D., Gupta R., Jain N., Kumar Dinesh, Kumar R.M., Ladha J.K., Mandal P.K., Neeraja C.N., Pandey R., Pathak H., Pawar Pooja, … et al., 2021, Nitrogen challenges and opportunities for agricultural and environmental science in India, **Frontiers in Sustainable Food Systems**, 5: 505347, DOI:10.3389/fsufs.2021.505347, 1-16
174. Móring A., Hooda S., Raghuram N., Adhya T.K., Ahmad A., Bandyopadhyay S.K., Barsby T., Beig G., Bentley A.R., Bhatia A., Dragosits U., Drewer J., Foulkes John, Ghude S.D., Gupta R., Jain N., Kumar Dinesh, Kumar R.M., Ladha J.K., Mandal P.K., Neeraja C.N., Pandey R., Pathak H., Pawar Pooja, … et al., 2021, Nitrogen challenges and opportunities for agricultural and environmental science in India, **Frontiers in Sustainable Food Systems**, 5: 505347, DOI:10.3389/fsufs.2021.505347, 1-16
175. Moulick D., Samanta S., Sarkar S., Mukherjee A., Pattnaik B.K., … et al., 2021, Arsenic contamination, impact and mitigation strategies in rice agro-environment: An inclusive insight, **Science of the Total Environment**, 800: 149477, DOI:10.1016/j.scitotenv.2021.149477, 1-30
176. Mudiar D., Pawar S.D., Gopalakrishnan V., Williams E., 2021, Electric field enlarges raindrops beneath electrified clouds: Observational evidence, **Geophysical Research Letters**, 48: e2021GL093577, DOI:10.1029/2021GL093577, 1-10
177. Mudiar D., Pawar S.D., Hazra A., Gopalakrishnana V., Lal D.M., Chakravarty Kaustav, Domkawale M.A., Srivastava M.K., Goswami B.N., William E., 2021, Lightning and precipitation: The possible electrical modification of observed raindrop size distributions, **Atmospheric Research**, 259: 105663, DOI: 10.1016/j.atmosres.2021.105663, 1-17
178. Mujumdar M., Goswami M.M., Morrison R., Evans J.G., Ganeshi N., Sabade S.S., Krishnan R., Patil S.N., 2021, A study of field-scale soil moisture variability using the COsmic-ray Soil Moisture Observing System (COSMOS) at IITM Pune site, **Journal of Hydrology**, 597: 126102, DOI: 10.1016/j.jhydrol.2021.126102, 1-13
179. Mukherjee S., Anil Kumar V., Patil R.D., Meena G.S., Buchunde P., Waghmare V., Deshmukh S., Dhavale V., Ray A., Panicker A.S., Sonbawne S.M., Safai P.D., Pandithurai G., 2021, Investigation of physico-chemical characteristics and associated CCN activation for different combustion sources through Chamber experiment approach, **Atmospheric Environment**, 266: 118726, DOI:10.1016/j.atmosenv.2021.118726, 1-9
180. Mukhopadhyay P., Bechtold P., Zhu Y., Krishna R.P.M., Kumar Siddharth, Ganai M., Tirkey S., Goswami T., Mahakur M., Deshpande M., Prasad V.S., Johny C.J., Mitra A., Ashrit R., Sarkar A., Sarkar Sahadat, Roy Kumar, Andrews E., Kanase R., Malviya S., Abhilash S., Domkawle M., Pawar S.D., Mamgain A., Durai V.R., Nanjundiah R.S., Mitra A.K., Rajagopal E.N., Mohapatra M., Rajeevan M., 2021, Unravelling the mechanism of extreme (more than 30 sigma) precipitation during August 2018 and 2019 over Kerala, India, **Weather and Forecasting**, 36, DOI:10.1175/WAF-D-20-0162.1, 1253-1273

181. Murali Krishna U.V., Das Subrata Kumar, Deshpande S.M., Pandithurai G., 2021, Physical processes controlling the diurnal cycle of convective storms in the Western Ghats, **Scientific Reports**, 11: 14103, DOI:10.1038/s41598-021-93173-0, 1-13
182. Nair N., 2021, Seismic stratigraphy and the sedimentation history in the Laxmi Basin of the eastern Arabian Sea—constraints from IODP Expedition 355, **Geoscience Frontiers,** DOI:10.1016/j.gsf.2020.11.008.
183. Nair P.J., Varikoden H., Francis P.A, Chakraborty A., Pandey P.C., 2021, Atmospheric moisture as a proxy for the ISMR variability and associated extreme weather events, **Environmental Research Letters**, 16: 014045, DOI:10.1088/1748-9326/abcfe0, 1-16
184. Narkhedkar S.G., Dutta S.N., Anilkumar V., Mukherjee S., Pandithurai G., 2021, Rainfall characteristics and its variability over a high-altitude station in Western Ghats during southwest monsoon of 2015 - A case study, **Mausam**, 72, 331-348
185. Naskar P.R., 2021, Statistical analysis of wind characteristics and wind energy potential of Port Blair, India, **Mausam**, 72, 2, 443-456
186. Naskar P.R., Katiyar S., Bondyopadhyay S., 2021, Pre-monsoon and post-monsoon groundwater chemical analysis For Burdwan (West Bengal), India, **Mausam**, 72**,** 4, 859–864
187. Naskar P.R., Naskar S., 2021, Synoptic and dynamical characteristics of super cyclone Amphan, **Mausam**, 72, 1, 237-252
188. Naveena N., Satyanarayana G.Ch., Bhaskar Rao D.V., Srinivas D., 2021, An accentuated "hot blob" over Vidarbha, India, during the pre-monsoon season, **Natural Hazards**, 105, 2, 1359–1373
189. Nuruzzama M., Rahaman W., Mohan M., 2021, Sources, distribution and biogeochemical cycling of dissolved trace elements in the coastal lakes of Larsemann Hills, East Antarctica, Science of the Total Environment, DOI:10.1016/j.scitotenv.2020.142833
190. Panda Chinmaya, Das D.M.., Sahoo B.C., Panigrahi B., Singh K.K., 2021, Spatio-temporal modeling of surface runoff in ungauged sub-catchments of Subarnarekha river basin using SWAT, **Mausam**, 72, 3, 597-606
191. Pandey A., Brauer M., Cropper M.L., Balakrishnan K., Mathur P., Dey S., Turkgulu B., Kumar G.A., Khare M., Beig G., et.al. India State-Level Disease Burden Initiative Air Pollution Collaborators, 2021, Health and economic impact of air pollution in the states of India: the Global Burden of Disease Study 2019, **Lancet**, 5, DOI:10.1016/S2542-5196(20)30298-9, E25-E38
192. Panicker A.S., Anilkumar V., Raju M.P., Pandithurai G., Safai P.D., Beig G., Das S., 2021CCN activation of carbonaceous aerosols from different combustion emissions sources: A laboratory study, Atmospheric Research, 248: 105252, DOI:10.1016/j.atmosres.2020.105252, 1-6
193. Panicker A.S., Sandeep K., Gautam A.S., Trimbake H.K., Nainwal H.C., Beig G., Bisht D.S., Das S., 2021, Black carbon over a central Himalayan Glacier (Satopanth): Pathwaysand direct radiative impacts, **Science of the Total Environment**, 766: 144242, DOI:10.1016/j.scitotenv.2020.144242, 1-8
194. Panicker A.S., Shaima N., Aerosol Oscillations Over Different Emission Regions in India, **Pure and Applied Geophysics**, 178, October 2021, DOI:10.1007/s00024-021-02833-9, 4097-4105
195. Patel A., Goswami A., Dharpure J.K., Thamban M., 2021, Rainfall variability overthe Indus, Ganga, and Brahmaputra river basins: A spatio-temporal characterisation, **Quaternary International,** DOI:10.1016/ j.quaint.2020.06.010
196. Pattanaik D.R., Mandal R., Phani R., Dey Avijit, Chattopadhyay R., Joseph S., Sahai A.K., Mohapatra M., 2021, Large-scale features associated with excess monsoon rainfall over india during 2019 and the real-time extended range forecast, **Meteorology and Atmospheric Physics**, 133, DOI:10.1007/s00703-021-00808-y, 1275-1297

197. Pattanaik D.R., Mohapatra M., 2021, Evolution of IMD's operational extended range forecast system of tropical cyclogenesis over North Indian Ocean during 2010-2020, **Mausam**, 72, 1, 35-56
198. Paul B., Balaji B., Paul A., Francis P.A., Shetye S.R., 2021, Absence of the annual cycle in shelf current inshore of the East Indian Coastal Current, **Continental Shelf Research**, 215: 104355, DOI:10.1016/j.csr.2021.104355, 1-11
199. Pawar P.V., Ghude S.D., Jena C., Móring A., Sutton M.A., Kulkarni S., Lal D.M., Surendran D., Van Damme M., Clarisse L., Coheur P.-F., Liu X., Govardhan G., Xu W., Jiang J., Adhya T.K., 2021, Analysis of atmospheric ammonia over South and East Asia based on the MOZART-4 model and its comparison with satellite and surface observations, **Atmospheric Chemistry and Physics**, 21, DOI:10.5194/acp-21-6389-2021, 6389–6409
200. Phukan R., Kumar Rakesh, Chanda M., Das Rana, Saha D., 2021, A Synoptic and Thermodynamic Analysis for Forecasting of Squalls at Agartala, **Mausam**, 72, 4, 791–802
201. Pillai P.A., Ramu D.A., Nai R.C., 2021Recent changes in the major modes of Asian summer monsoon rainfall: influence of ENSO-IOD relationship, Theoretical and Applied Climatology, 143, DOI:10.1007/s00704-020-03454-3, 869-881
202. Pillai P.A., Rao Suryachandra A., Srivastava Ankur, Dandi R.A., Pradhan M., Das Renu S., 2021, Impact of the tropical Pacific SST biases on the simulation and prediction of Indian summer monsoon rainfall in CFSv2, ECMWF-System4, and NMME models, **Climate Dynamics**, 56, DOI:10.1007/s00382-020-05555-1, 1699-1715
203. Pottapinjara V., Roxy M.K., Girishkumar M.S., Ashok K., Joseph Sudheer, Ravichandran M., Murtugudde R., 2021, Simulation of interannual relationship between the Atlantic zonal mode and Indian summer monsoon in CFSv2, **Climate Dynamics**, 57, DOI:10.1007/s00382-021-05712-0, 353–373
204. Prabhu A., Mandke S.K., Kripalani R.H., Pandithurai G., 2021, Association between Antarctic Sea ice, Pacific SST and the Indian summer monsoon: An observational study, **Polar Science**, 30: 100746, DOI:10.1016/j.polar.2021.100746, 1-11
205. Prabhu A., Mandke S.K., Pandithurai G., 2021, Regional perspectives in Eurasian snow - Indian monsoon relationship: An observational study, **Polar Science**, 30: 100718, DOI:10.1016/j.polar.2021.100718, 1-15
206. Pradhan M., Rao Suryachandra A., Doi T., Pillai P.A., Srivastava Ankur, Behera S., 2021, Comparison of MMCFS and SINTEX-F2 for seasonal prediction of Indian summer monsoon rainfall, **International Journal of Climatology**, 41, DOI:10.1002/joc.7169, 6084-6108
207. Pradhan M., Rao Suryachandra A., Srivastava Ankur, 2021, Factors responsible for consecutive deficit Indian monsoons during 2014 and 2015, **Theoretical and Applied Climatology**, 143, DOI:10.1007/s00704-020-03486-9, 1473-1486
208. Pradhan M., Srivastava Ankur, Rao Suryachandra A., Banerjee D.S., Chatterjee A., Francis P.A., Sreejith O.P., Gupta M.D., Prasad V.S., 2021, Are ocean-moored buoys redundant for prediction of Indian monsoon?, **Meteorology and Atmospheric Physics**, 133, DOI:10.1007/s00703-021-00792-3, 1075-1088
209. Pradhan P.K., Dasari H.P., Desamsetti S., Bhaskara Rao S.V., Guvvala R., 2021, Sensitivity to initial conditions on the simulation of extratropical cyclone 'Gong' formed over North Atlantic, **Journal of Earth System Science,** 130, 46, DOI:10.1007/s12040-020-01546-2
210. Pradhan P.K., Kumar V., Sunilkumar K., Rao S.V.B., Sinha T.; Kattamanchi V.K., Pattnaik S., 2021, Demonstration of the Temporal Evolution of Tropical Cyclone "Phailin" Using Gray-Zone Simulations and Decadal Variability of Cyclones over the Bay of Bengal in a Warming Climate, **Oceans**, 2, DOI:10.3390/oceans2030037, 648-674

211. Prasad V.S., Dutta Suryakanti, Pattanayak Sujata, Johny C.J., George J.P., Kumar Sumit, Indira Rani S., 2021, Assimilation of satellite and other data for forecasting tropical cyclones over NIO, Tropical Cyclone Special issue, **Mausam**, 72, 1, 107-118
212. Prasanna K., Chowdary J.S., Singh Prem, Chiranjeevi D., Naidu C.V., Parekh A., Gnanaseelan C., 2021, Assessment of APCC models fidelity in simulating the Northeast monsoon rainfall variability over Southern Peninsular India, **Theoretical and Applied Climatology**, 144, DOI:10.1007/s00704-021-03559-3, 931-948
213. Rajan Devaraj, Desamsetti S., 2021, Prediction of Indian summer monsoon onset with high resolution model: a case study, **SN Applied Sciences**, 3, 645, DOI:10.1007/s42452-021-04646-w
214. Rajasree V.P.M., Routray A., George J.P., Kumar Sumit, Kesarkar A.P., 2021, Study of cyclogenesis of developing and non-developing tropical systems of NIO using NCUM forecasting system, **Meteorology and Atmospheric Physics**, 133, 379–397
215. Raju D., Hosalikar K.S., Satyanarayana G.C., Rao K.S., Umakantha N., Neelam N., 2021, Centuries of Heat waves over India during 20th and 21st Century, **Applied Environmental Research**, 43, 4, DOI:10.35762/AER.2021.43.4.1, 1-13.
216. Rana M., Mittal S.K., Beig G., 2021Assessment and prediction of surface ozone in Northwest Indo-Gangetic Plains using ensemble approach, Environment, Development and Sustainability, 23, DOI:10.1007/s10668-020-00841-8, 5715-5738
217. Raut B.A., Konwar M., Murugavel P., Kadge D., Gurnule D., Sayyed I., Todekar K., Malap N., Bankar S., Prabhakaran Thara, 2021, Microphysical origin of raindrop size distributions during the Indian monsoon, **Geophysical Research Letters**, 48: e2021GL093581, DOI:10.1029/2021GL093581, 1-12
218. Ravi Kumar K., Singh B.B., Niranjan Kumar K., 2021, Intriguing aspects of Asian summer monsoon anticyclone ozone variability from microwave limb sounder measurements, **Atmospheric Research**, 253: 105479, DOI:10.1016/j.atmosres.2021.105479, 1-7
219. Ravindran Suraj, Pant Vimlesh, Mitra A.K., Kumar Avinash, 2021, Spatio-temporal variability of sea-ice and ocean parameters over the Arctic Ocean in response to a warming climate, **Polar Science,** DOI:10.1016/j.polar.2021.100721
220. Ray R., Bhattacharya A., Arora G., Bajaj K., Horton K., Chen S., Chakraborty S., Bazaz A., 2021, Extreme rainfall deficits were not the cause of recurring colonial era famines of southern Indian semi-arid regions, **Scientific Reports**, 11:17568, DOI:10.1038/s41598-021-96826-2, 1-9
221. Reddy V.M., Reddy K.K., Murali Krishna U.V., Surendra Prasad S.B., Bonthu S., Mitra A.K., 2021, Simulation of tropical cyclones over the Bay of Bengal during 1999-2013: Impact of physical parameterization schemes, **Mausam**, 72, 1, 177-186
222. Reshma T., Varikoden H., Babu C.A., 2021, Observed changes in Indian summer monsoon rainfall at different intensity bins during the past 118 years over five homogeneous regions, **Pure and Applied Geophysics**, 178, DOI:10.1007/s00024-021-02826-8, 3655-3672
223. Routray A., Dutta D., Lodh A., George J.P., 2021, Impact of the assimilation of DWR-derived precipitation rates through latent heat nudging on simulation of rainfall events over Indian Region using NCUM-R, **Journal of Hydrology**, 596: 126072, DOI:10.1016/j.hydrol.2021-126072
224. Roy C., Fadnavis S., Sabin T.P, 2021The stratospheric ozone rich cold intrusion during El-Niño over the Indian region: implication during the Indian summer monsoon, International Journal of Climatology, 41, DOI:10.1002/joc.6680, E233-E248
225. Roy K., Mukhopadhyay P., Krishna R.P.M., Khouider B., Goswami B.B., 2021, Evaluation of mean state in NCEP Climate Forecast System (version 2) simulation using a stochastic multicloud model calibrated with DYNAMO RADAR data, **Earth and Space Science**, 8: e2020EA001455, DOI:10.1029/2020EA001455, 1-14
226. Roy Kumar, Mukhopadhyay P., Krishna R.P.M., Nair A.K.M., Narayana Rao T., Ramakrishna

S.S.V.S., 2021, Role of autoconversion process in assessing the low-level clouds over the southern Indian Ocean in Climate Forecast System (CFS) version 2, **Theoretical and Applied Climatology**, 145, DOI:10.1007/s00704-021-03630-z, 273–284

227. Sabeerali C.T., Ajayamohan R.S., Praveen V., 2021, Atlantic zonal mode-monsoon teleconnection in a warming scenario, **Climate Dynamics**, DOI:10.1007/s00382-021-05996-2, 1-15
228. Saha Sourita, Sharma Som, Niranjan Kumar K., Kumar Prashant, Joshi V., Georgoussis G., Lal S., 2021, A case study on thevertical distribution and characteristics of aerosols using ground-basedramanlidar, satellite and model over Western India, **International Journal of Remote Sensing,** 42, 17, 6421-6436
229. Saha Subodh Kumar, Konwar M., Pokhrel S., Hazra A., Chaudhari H.S., Rai A., 2021, Interplay between subseasonal rainfall and global predictors in modulating interannual to multidecadal predictability of the ISMR, **Geophysical Research Letters**, 48: e2020GL091458, DOI: 10.1029/2020GL091458, 1-11
230. Sahai A.K., Kaur Manpreet, Joseph S., Dey Avijit, Phani R., Mandal R., Chattopadhyay R., 2021, Multi-Model Multi-Physics Ensemble: A Futuristic Way to Extended Range Prediction System, **Frontiers in Climate**, 3: 655919, DOI:10.3389/fclim.2021.655919, 1-11
231. Saharia M., Jain A.B., Haobam R.R., **Sreejith O.P.**, **Pai D.S.,** Nasab A.R., 2021, India Flood Inventory: Creation of a multi-source national geospatial database to facilitate comprehensive flood research, **Natural Hazards**, 1-15
232. Saheed P.P., Mitra Ashish K., Momin I.M., Pant Vimlesh, 2021, Antarctic winter sea-ice seasonal simulation with a coupled model: Evaluation of mean features and biases, **Journal of Earth System Science,** 130: 204, DOI:10.1007/s12040-021-01714-y
233. Sahoo M., Yadav R.K., 2021, Role of equatorial central Pacific sea surface temperature in modulating rainfall over north India during Indian summer monsoon, **International Journal of Climatology**, 41, November 2021, DOI:10.1002/joc.7165, 6017-6030
234. Sahoo M., Yadav R.K., T2021, eleconnection of Atlantic Nino with summer monsoon rainfall over northeast India, **Global and Planetary Change**, 203: 103550, DOI:10.1016/j.gloplacha.2021.103550, 1-10
235. Sahu S.K., Mangaraj P., Beig G., Tyagi B., Tikle S., Vinoj V., 2021, Establishing a link between fine particulate matter (PM2.5) zones and COVID -19 over India based on anthropogenic emission sources and air quality data, **Urban Climate**, 38: 100883, DOI:10.1016/j.uclim.2021.100883, 1-12
236. Saikrishna T.S., Ramu D.A., Osuri K.K., 2021, Inter-comparison of high-resolution satellite precipitation products over India during the summer monsoon season, **Meteorology and Atmospheric Physics**, 133, DOI:10.1007/s00703-021-00829-7, 1675-1690
237. Samanta S., Murugavel P., Gurnule D., Jaya Rao Y., Vivekanandan J., Prabhakaran Thara, 2021, The Life Cycle of a Stationary Cloud Cluster during the Indian Summer Monsoon: A Microphysical Investigation Using Polarimetric C-Band Radar, **Monthly Weather Review**, 149, DOI:10.1175/MWR-D-20-0274.1, 3761-3780
238. Samanta S., Prabhakaran Thara, Murugavel P., Suneetha P., 2021, Rainfall types in the lifecycle of a stationary cloud cluster during the Indian Summer Monsoon: An investigation with numerical simulations and radar observation, **Atmospheric Research**, 263: 105794, DOI:10.1016/j.atmosres.2021.105794, 1-15
239. Sandeep A., Jayakumar A., Sateesh M., Mohandas S., Prasad V.S., Rajagopal E.N., 2021, Assessment of the Efficacy of Lightning Forecast over India: A Diagnostic Study, **Pure & Applied Geophysics**, 178, 205-222

240. Sandeep K., Panicker A.S., Gautam, A.S., Safai P.D., Beig G., Nainwal H.C., Bisht D.S., Das S., 2021, Observations of black carbon and albedo over a Central Himalayan Glacier (Satopanth): Preliminary results, **Journal of Atmospheric and Solar Terrestrial Physics**, 216: 105580, DOI:10.1016/j.jastp.2021.105580, 1-8
241. Sandhu S., Sathe V., Chakarborty K.S., Chakraborty S., Chauhan P.R., 2021, Carbon and Oxygen Isotope Analysis of Modern Cattle (Bos indicus) Molars from the Central Narmada Valley, India, **Ancient Asia**, 12: 3, DOI:10.5334/aa.210, 1-19
242. Sarkar Abhijit, Kumar Sushant, Dube A., Prasad S.K., Mamgain A., Chakraborty P., Ashrit R., Mitra A.K., 2021, Forecasting of tropical cyclone using global and regional ensemble prediction systems of NCMRWF: A review. **Mausam**, 72, 1, 77-86
243. Sarkar S., Mukhopadhyay P., Dutta S., Krishna R.P.M., Kanase R., Prasad V.S., Deshpande M.S., 2021, GFS model fidelity in capturing the transition of low pressure area to monsoon depression, **Quarterly Journal of Royal Meteorological Society**, 147, DOI:10.1002/qj.4024, 2625-2637
244. Sarkar S., Mukhopadhyay P., Krishna R.P.M., Dutta S., 2021, Atmospheric dynamics and internal processes in CFSv2 model during organization and intensification of BSISO, **Journal of Earth System Science**, 130: 229, DOI:10.1007/s12040-021-01727-7, 1-18
245. Sarla, Srivastava Atul K., Ahlawat A., Mishra S.K., 2021, Impact of COVID-19 lockdown on aerosol optical and radiative properties over Indo-Gangetic Plain, **Urban Climate**, 37: 100839, DOI:10.1016/j.uclim.2021.100839, 1-14
246. Sarmah S., Singha M., Wang J., Dong J., Deb Burmana P.K., Goswami S., Ge Y., Ilyas S., Niu S., 2021, Mismatches between vegetation greening and primary productivity trends in South Asia – A satellite evidence, **International Journal of Applied Earth Observation and Geoinformation**, 104: 102561, DOI:10.1016/j.jag.2021.102561, 1-12
247. Sateesh M., Khadke C., Prasad V.S., Goyal S., 2021, Validation of satellite estimated convective rainfall products: A case study for the summer cyclone season of 2020, **Mausam**, 72, 1, 229-236
248. Sateesh M., Khadke C., Prasad V.S., Goyal Suman, 2021, Validation of satellite estimated convective rainfall products: a cast study for the summer cyclone season of 2020, **Mausam,** Sp. Issue: Tropical Cyclone,72, 1, 229-236
249. Sathyanadh A., Prabhakaran Thara, Subharthi Chowdhuri S., Balaji B., Resmi E.A., Karipot A., 2021, Evaluation of PBL parameterization schemes against direct observations during a land depression over Central India, **Theoretical and Applied Climatology**, 144, DOI:10.1007/s00704-021-03532-0, 253-271
250. Satya Prakash, Srinivasan J., A comprehensive evaluation of near-real-time and research products of IMERG precipitation over India for the southwest monsoon period, **Remote Sensing**, 13, DOI:10.3390/rs13183676, 1-19
251. Sen Roy S., Sharma P., Sen B., Sathi Devi K., Sunitha Devi S., Gopal N.K., Kumar Naresh, Mishra Krishna, Katyar S., Singh S.P., Balakrishnan S., Singh C., Srivastava K., Lotus S., Paul S., Singh B., Gupta J.P., Bandopadhyay S., Das G., Shankar A., Kotal S.D., Biswas H.R., O'Neil Shaw S., Das Sunit, Phukan R., Nagarathna K., Balachandran S., Puviarasan N., Stella S., Bibraj R., Mini V.K., Rahul M., Agnihotri G., Sarkar J., Mohanty M., Ved Prakash, K. Hosalikar, T. S. Nitha, M. L. Sahu, Bhawna Kumari, Anupam Kashyapi, Manmohan Singh, H. A. Singh K., Sharma R.S., Raha G.N., Reddy Y.K., Ramesh K.J., Mohapatra M., 2021, A new paradigm for short range forecasting of severe weather over the Indian region, **Meteorology and Atmospheric Physics**, DOI:10.1007/s00703-021-00788-z-11
252. Shahi N.K., Rai S., Sahai A.K., Abhilash S., 2021, Prediction of dominant daily modes of the Indian summer monsoon in the NCEP GFS model, **Meteorology and Atmospheric Physics**, 133, DOI:10.1007/s00703-021-00793-2, 1009-1027

253. Shamal M., Sanjay J., 2021, An observational equatorial Atlantic Ocean constraint on Indian monsoon precipitation projections, **Climate Dynamics**, 57, DOI:10.1007/s00382-021-05703-1, 209–221
254. Sharma Kuldeep, Ashrit R., Kumar Sushant, Milton S., Rajagopal E.N., Mitra Ashish Kumar, 2021, Unified model rainfall forecasts over India during 2007-2018: Evaluating extreme rains over hilly regions, **Journal of Earth System Science**, 130: 82, DOI:10.1007/s12010-021-01595-1, 1-13
255. Shroyer E., Tandon A., Sengupta D., Fernando H.J, Lucas A.J, Farrar J.T, Chattopadhyay R., …, Sahai A.K., … et al., 2021, Bay of Bengal Intraseasonal Oscillations and the 2018 Monsoon Onset, **Bulletin of the American Meteorological Society**, 102, DOI:10.1175/BAMS-D-20-0113.1, E1936–E1951
256. Shukla Arnav, Agnihotri G., 2021, Analysis of Fog and Inversion Characteristics Over Sub-Urban Bangalore, **Mausam**, 72, 2, 387-398
257. Sin'kevich A., Boe B., Pawar S.D., Yang J., Abshaev A., Dovgaluk Y., Gekkieva J., Gopalakrishnan V., Kurov A., Mikhailovskii Y., Toropova M., Veremei N., 2021, Investigation of thundercloud features in different regions, **Remote Sensing**, 13, DOI:10.3390/rs13163216, 1-19
258. Sin'kevich A.A., Boe B., Pawar S.D., Kurov A.B., Gopalakrishnan V., 2021, Investigation of Radar and Electrical Characteristics of Thunderclouds Seeded with a Glaciogenic Reagent in Karnataka, India, **Russian Meteorology and Hydrology**, 46, DOI:10.3103/S1068373921080069, 545–552
259. Sin'kevich A.A., Popov V.B., Abshaev A.M., Boe B.A., Pawar S.D., Mikhailovskii Yu. P., Toropova M.L., Gopalakrishnan V., Gekkieva Zh. M., 2021, Radar Characteristics of Convective Clouds during Transition to the Cumulonimbus Stage in Different Regions of the World, **Atmospheric and Oceanic Optics**, 34, 135-140
260. Singh A., Srivastava Atul K., Varaprasad V., Kumar S., Pathak V., Shukla A.K., 2021, Assessment of near-surface air pollutants at an urban station over the central Indo-Gangetic Basin: Role of pollution transport pathways, **Meteorology and Atmospheric Physics**, 133, DOI:10.1007/s00703-021-00798-x, 1127–1142
261. Singh A.K., Bhargawa A., Siingh D., Singh R.P., 2021, Physics of space weather phenomena: A Review, **Geosciences**, 11: 286, DOI:10.3390/geosciences1107028, 1-46
262. Singh B.B., Krishnan R., Ayantika D.C., Vellore R.K., Sabin T.P., Ravi Kumar K., Brunamonti S., Hanumanthu S., Jorge T., Oelsner P., Sonbawne S., Naja M., Fadnavis S., Peter T., Srivastava M.K., 2021, Linkage of water vapor distribution in the lower stratosphere to organized Asian summer monsoon convection, **Climate Dynamics**, 57, DOI:10.1007/s00382-021-05772-2, 1709-1731
263. Singh Deep Karan, Yadav Ramashray, Sai Krishnan K.C., Rawat Nisha, 2021, Analysis of three unusual severe weather events over Delhi during May-June, 2018 using Dual-Pol Doppler Weather Radar and GNSS data, **Mausam**, 72, 4, 719-738
264. Singh Manmeet, Singh B.B., Singh R., Upendra B., Kaur R., Gill S.S., Biswas M.S., 2021, Quantifying COVID-19 enforced global changes in atmospheric pollutants using cloud computing based remote sensing, **Remote Sensing Applications: Society and Environment**, 22: 100489, DOI:10.1016/j.rsase.2021.100489
265. Singh R.N., Sah S., Das B., Vishnoi L., Pathak H., 2021, Spatio-temporal trends and variability of rainfall in Maharashtra, India: Analysis of 118 years, **Theoretical and Applied Climatology**, 143, DOI:10.1007/s00704-020-03452-5, 883–900
266. Singh R.S., Singh K.K., Bhengra A.H., Singh S.M., Prasad G., Singh Priyanka, Rana M., Gohain G.B, 2021, Potential yield and yield gap analysis of sugarcane (Saccharum officinarum) using the DSSAT-CANEGRO model in different districts of Uttar Pradesh, India, **Journal of**

Agrometeorology, 23, 2, 147-153

267. Singh Tarkeshwar, Saha Upal, Prasad V.S., Das Gupta M., 2021, Assessment of newly-developed high resolution reanalysis (IMDAA, NGFS and ERA5) against rainfall observations for Indian region, **Atmospheric Research,** 259, DOI:10.1016/j.atmosres.2021.105679
268. Singh V.K., Roxy M.K., Deshpande M., 2021, Role of warm ocean conditions and the MJO in the genesis and intensification of extremely severe cyclone Fani, **Scientific Reports**, 11: 3607, DOI:10.1038/s41598-021-82680-9, 1-10
269. Singh Vivek, Konduru R.T., Srivastava A.K., Momin I.M., Kumar Sushant, Singh A.K., Bisht D.S., Tiwari Suresh, Sinha A.K., 2021, Predicting the rapid intensification and dynamics of pre-monsoon extremely severe cyclonic storm 'Fani' (2019) over the Bay of Bengal in a 12-km global model, Atmospheric Research, 247: 105222, DOI:10.1016/j.atmosres.2020.105222, 1-18
270. Sonbawne S.M., Devara P.C.S., Bhawar R., Rahul P.R.C., Siingh D., Fadnavis S., Panicker A.S., Pandithurai G., 2021, Aerosol physico–optical–radiative characterization and classification during summer over Ny-Ålesund, Arctic, **International Journal of Remote Sensing**, 42, DOI:10.1080/01431161.2021.1987576, 8760-8781
271. Sonbawne S.M., Devara P.C.S., Bhoyar P.D., 2021, Multisite characterization of concurrent black carbon and biomass burning around COVID-19 lockdown period, **Urban Climate**, 39: 100929, DOI:10.1016/j.uclim.2021.100929, 1-14
272. Soyam P.S, Safai P.D, Mukherjee S., Todekar K., Bankar S., Gurnule D., Malap N., Prabhakaran Thara, Black carbon aerosols over a semi-arid rain shadow location in Peninsular India: Temporal variability and sources, **Journal of Earth System Science**, 130: 95, DOI:10.1007/s12040-021-01610-5, 1-14
273. Sreejith O.P., Srivastava A.K., Rajeevan M., 2021, State of the Climate in 2020: South Asia, **Bulletin of the American Meteorological Society**, DOI:10.1175/2021BAMS, S437-S439
274. Sreenath A.V., Malap N., Abhilash S., Kulkarni G.U., Prabhakaran Thara, 2021, Precipitation processes over Indian region under different environmental conditions from in situ measurements, **Atmospheric Research**, 262: 105775, DOI:10.1016/j.atmosres.2021.105775, 1-17
275. Srivastava Akhil, Prasad V.S., Das Anand Kumar, Sharma Arun, 2021, An HWRF-POM-TC coupled model forecast performance over North Indian Ocean: VSCS TITLI & VSCS LUBAN, **Tropical cyclone Research and Review**, 10, 1, DOI:10.1016/j.tcrr.2021.04.002, 54-70
276. Srivastava Ankur, Rao Suryachandra A., Pradhan M., Pillai P.A., Prasad V.S., 2021, Gain of one-month lead time in seasonal prediction of Indian summer monsoon prediction: comparison of initialization strategies, **Theoretical and Applied Climatology**, 143, DOI:10.1007/s00704-020-03470-3, 1083–1096
277. Srivastava Atul K., Bhoyar P.D., Kanawade V.P., Devara P.C.S., Thomas A., Soni V.K., 2021, Improved air quality during COVID-19 at an urban megacity over the Indo-Gangetic Basin: From stringent to relaxed lockdown phases, **Urban Climate**, 36: 100791, DOI: 10.1016/j.uclim.2021.100791, 1-13
278. Srivastava Atul K., Thomas A., Hooda R.K., Kanawade V.P., Hyvärinen A.-P., Bisht D.S., Tiwari Suresh, 2021, How secondary inorganic aerosols from Delhi influence aerosol optical and radiative properties at a downwind sub-urban site over Indo-Gangetic Basin?, **Atmospheric Environment**, 248: 118246, DOI:10.1016/j.atmosenv.2021.118246, 1-10
279. Srivastava P.K., Pradhan R.K., Petropoulos G.P., Pandey V., Gupta M., Yaduvanshi A., Jaafar W.Z.W., Mall R.K., Sahai A.K., 2021, Long-Term Trend Analysis of Precipitation and Extreme Events over Kosi River Basin in India, **Water**, 13: 1695, DOI:10.3390/w13121695, 1-13

280. Sudeepkumar B.L., Babu C.A., Varikoden H., 2021, Thermodynamic structure of monsoon boundary layer over the west coast of India, **Atmospheric Research**, 261: 105748, DOI:10.1016/j.atmosres.2021.105748, 1-16
281. Sukanya P., Kalapureddy M.C.R., 2021, Cloud radar observations of multi-scale variability of cloud vertical structure associated with Indian summer monsoon over a tropical location, **Climate Dynamics**, 56, DOI:10.1007/s00382-020-05520-y, 1055-1081
282. Sukla K.K., Phanikumar D.V., Kumar Kondapalli N., Kumar Ashish, Naja M., Sharma Som K., Raju Attada, 2021, Micro-pulse Lidar observations of elevated aerosol layers over the Himalayan region, **Journal of Atmospheric Solar Terrestrial Physics**, 213, 4, DOI:10.1016/j.jastp.2020.105526
283. Sunil S., Padmakumari B., Pandithurai G., Patil R.D., Naidu C.V., 2021, Diurnal (24 h) cycle and seasonal variability of cloud fraction retrieved from a Whole Sky Imager over a complex terrain in the Western Ghats and comparison with MODIS, **Atmospheric Research**, 248: 105180, DOI:10.1016/j.atmosres.2020.105180, 1-13
284. Swetha S., Chowdary J.S., Parekh A., Gnanaseelan C., 2021, Decadal prediction skill for spring and summer surface air-temperature over India and its association with SST patterns in CFSv2 and CNRM coupled models, **Journal of Earth System Science**, 130: 55, DOI:10.1007/s12040-021-01563-9, 1-13
285. Tebaldi C., Debeire K., Eyring V., ..., Swapna P., … et al., 2021, Climate model projections from the Scenario Model Intercomparison Project (ScenarioMIP) of CMIP6, **Earth System Dynamics**, 12, DOI:10.5194/esd-12-253-2021, 253–293
286. Tejavath C.T., Ashok K., Chakraborty S., 2021, The Importance of the Orbital Parameters for the Indian Summer Monsoon During the Mid-Holocene, as Deciphered from Atmospheric Model Experiments, **Frontiers in Earth Science,** 9: 631310, DOI:10.3389/feart.2021.631310, 1-14
287. Terray P., Sooraj K.P., Masson. S., Prodhomme C., 2021, Anatomy of the Indian Summer Monsoon and ENSO relationships in state-of-the-art CGCMs: role of the tropical Indian Ocean, **Climate Dynamics**, 56, DOI:10.1007/s00382-020-05484-z, 329-356
288. Tharranum A. M., Singh K.K., Pandey A.C., Singh Y.P., Kandpal B.K., 2021, Calibration and validation of thermal-time based models for forewarning of Aphid pest in rapeseed mustard Crop in India, **Mausam**, 72, 2, 501-506
289. Thomas A., Kanawade V.P., Chakravarty K., Srivastava A.K., 2021, Characterization of raindrop size distributions and its response to cloud microphysical properties, Atmospheric Research, 249: 105292, DOI:10.1016/j.atmosres.2020.105292, 1-9
290. Thomas A., Kanawade V.P., Sarangi C., Srivastava A.K., 2021, Effect of COVID-19 shutdown on aerosol direct radiative forcing over the Indo-Gangetic Plain outflow region of the Bay of Bengal, **Science of the Total Environment**, 782: 146918, DOI:10.1016/j.scitotenv.2021.146918, 1-8
291. Tikle S., Ilame T., Beig G., 2021, Impact of SAFAR Air Quality Forecasting Framework and advisory services in reducing the economic health burden of India, **Regional Economic Development Research**, 2, DOI:10.37256/redr.2220211063, 211-226
292. Tinmaker M.I.R., Dwivedi A.K., Islam S., Ghude S.D., Kulkarni S.H., Khare M., Chate D.M., 2021, Lightning activity variability with prevailing weather parameters and aerosol loading over dry and wet regions of India, **Pure and Applied Geophysics**, 178, DOI:10.1007/s00024-021-02695-1, 1445-1457
293. Tinmaker M.I.R., Jena C.K., Ghude S.D., Diwedi A.K., Islam S., Kulkarni S.H., Khare M.K., Chate D.M., 2021, Relationship of lightning with different weather parameters during transition period of dry to wet season over Indian region, **Journal of Atmospheric and Solar Terrestrial Physics**, 220: 105673, DOI:10.1016/j.jastp.2021.105673, 1-8

294. Tripathi N., Sahu L.K., Patel K., Kumar Ashwini, Yadav R., 2021, Ambient air characteristics of biogenic volatile organic compounds at a tropical evergreen forest site in Central Western Ghats of India, **Journal of Atmospheric Chemistry**, 78, DOI:10.1007/s10874-021-09415-y, 139-159
295. Uehling J., Misra V., Bhardwaj A., Karmakar N., 2021, Characterizing the Local Variations of the Northern Australian Rainy Season, **Monthly Weather Review**, 149, DOI:10.1175/MWR-D-21-0093.1, 3995-4004
296. Umakanth N., Satyanarayana G.Ch., Naveena N., Srinivas D., Rao D.V.B., 2021, Statistical and dynamical based thunderstorm prediction over southeast India, **Journal of Earth System Science,** 130, 71, DOI:10.1007/s12040-021-01561-x
297. Unnikrishnan C.K., Pawar S., Gopalakrishnan V., 2021, Satellite-observed lightning hotspots in India and lightning variability over tropical South India, **Advances in Space Research**, 68, DOI:10.1016/j.asr.2021.04.009, 1690-1705
298. Upadhyaya D.B, Evans J., Muddu S., Tomer S.K., Bitar A.A., Yeggina S., Thiyaku S., Morrison R., Fry M., Tripathi S.N., Mujumdar M., Goswami M., Ganeshi N., Nema M.K., Jain S.K., Angadi S.S., Yenagi B.S., 2021, The Indian COSMOS Network (ICON): Validating L-Band remote sensing and modelled soil moisture data products, **Remote Sensing**, 13: 537, DOI:10.3390/rs13030537, 1-25
299. Vaid B.H., Kripalani R.H., 2021, Strikingly contrasting Indian monsoon progressions during 2013 and 2014: role of Western Tibetan Plateau and the South China Sea, **Theoretical and Applied Climatology**, 144, DOI:10.1007/s00704-021-03590-4, 1131-1140
300. Valsala V., Sreeush M.G., Anju M., Sreenivas P., Tiwari Y.K., Chakraborty K., Sijikumar S., 2021, An observing system simulation experiment for Indian Ocean surface pCO2 measurements, **Progress in Oceanography**, 194: 102570, DOI: 10.1016/j.pocean.2021.102570, 1-14
301. Varghese M., Jose J., Anu A.S., Konwar M., Murugavel P., Kalarikkal N., Deshpande M., Prabhakaran Thara, 2021, Vertical profile of aerosol characteristics including activation over a rain shadow region in India, **Atmospheric Environment**, 262: 118653, DOI:10.1016/j.atmosenv.2021.118653, 1-13
302. Varghese M., Jose J., Anu A.S., Murugavel P., Resmi E.A., Bera S., Thomas S., Konwar M., Kalarikkal N., Prabhakaran Thara, 2021, Cloud and aerosol characteristics during dry and wet days of southwest monsoon over the rain shadow region of Western Ghats, India, **Meteorology and Atmospheric Physics**, 133, DOI:10.1007/s00703-021-00811-3, 1299-1316
303. Varghese M., Prabhakaran Thara, Patade S., Kulkarni G., Safai P.D., Axisa D., 2021, Characteristics of CCN activation and cloud microphysics over the east coast of India during the Northeast Monsoon onset, **Atmospheric Research**, 257: 105589, DOI:10.1016/j.atmosres.2021.105589
304. Verma S., Yadava P.K., Lal D.M., Mall R.K., Kumar H., Payra S., 2021, Role of lightning NOx in ozone formation: A review, **Pure and Applied Geophysics**, 178, DOI:10.1007/s00024-021-02710-5, 1425–1443
305. Victor N.J., Siingh D., Singh R.P., Gautam A.S., Gautam S., 2021, Analysis of positive and negative atmospheric air ions during New Particle Formation (NPF) events over urban city of India, **Aerosol Science and Engineering**, 5, DOI:10.1007/s41810-021-00115-4, 460-477
306. Vijayakumar P., Abhilash S., Sreenath A.V., Athira U.N., Mohankumar K., Mapes B.E., Chakrapani B., Sahai A.K., Niyas T.N., Sreejith O.P., 2021, Kerala floods in consecutive years - Its association with mesoscale cloudburst and structural changes in monsoon clouds over the west coast of India, **Weather and Climate Extremes**, 33: 100339, DOI: 10.1016/j.wace.2021.100339, 1-14
307. Vishnoi Lata, Bisht Himani, Shri Ram, Nain A.S., 2021, Soil fertility assessment for ensuring food security in lower Himalayan range using GIS techniques, **Journal of Soil and Water Conservation**, 48, 1, 41-46

308. Vishnoi Lata, Kumar Anupam, Kumar Sunil, Sharma Gaurav, Baxla A.K., Singh K.K. and S. C. Bhan, 2021, Weather based crop insurance for risk management in agriculture, **Journal of Agrometeorology**, 22, 2, 101-108
309. Wagh S., Singh P., Ghude S.D., Safai P., Prabhakaran Thara, Pradeep Kumar P., 2021, Study of ice nucleating particles in fog-haze weather at New Delhi, India: A case of polluted environment, **Atmospheric Research**, 259: 105693, DOI:10.1016/j.atmosres.2021.105693, 1-10
310. Waghmare V.V., Aslam M.Y., Yang L., Safai P.D., Pandithurai G., 2021, Inorganic Ionic Composition of Rainwater at a High Altitude Station over the Western Ghats in Peninsular India, **Journal of Atmospheric Chemistry**, 78, DOI:10.1007/s10874-021-09416-x, 59-76
311. Wang B., Biasutti M., Byrne M.P., Castro C., Chang C., Cook K., Fu R., Grimm A.M., Ha K., Hendon H., Kitoh A., Krishnan R., Lee J., Li J., Liu J., Moise A., Pascale S., Roxy M.K., Seth A., … et al., 2021, Monsoon climate change assessment, **Bulletin of the American Meteorological Society**, 102, DOI:10.1175/BAMS-D-19-0335.1, E1-E19
312. Xue Y., Yao T., Boone A.A., Diallo I., …, Saha S.K., … et al., 2021, Impact of Initialized Land Surface Temperature and Snowpack on Subseasonal to Seasonal Prediction Project, Phase I (LS4P-I): organization and experimental design, **Geoscientific Model Development**, 14, DOI:10.5194/gmd-14-4465-2021, 4465–4494
313. Yadav R., Giri R.K., Singh V., 2021, Intercomparison review of IPWV retrieved from INSAT-3DR sounder, GNSS and CAMS reanalysis data, **Atmospheric Measurement Techniques,** 14, DOI:10.5194/amt-14-4857-2021, 1-21.
314. Yadav R.K., 2021, Relationship between Azores High and Indian summer monsoon, **npj Climate and Atmospheric Science**, 4: 26, DOI: 10.1038/s41612-021-00180-z, 1-9
315. Yadav Ramashray, Giri R.K., Singh Virendra, Intercomparison review of IPWV retrieved from INSAT-3DR sounder, GNSS and CAMS reanalysis data, **Atmospheric Measurement Techniques**, 14, DOI:10.5194/amt-14-4857-2021, 4857-4877

Other Publications

1. Attri S.D., Mohapatra M., 2021, Agrometeorological Services for Climate Resilient Agriculture, In: Kaushik A., Kaushik C.P., Attri S.D. (eds) **Climate Resilience and Environmental Sustainability Approaches: Global Lessons and local Challenges**, DOI:10.1007/978-981-16-0902-2_8, 127-139
2. Beig G., Gosavi S., Mukkannawar U.S., Sahu S.K., Tikle S., Dole S., Kamble P., Kale S., Murthy B.S., Latha R., Mangaraj P., Ambulkar R., Jadhav D., Basheer I., Yadav A., Shinde N., Palampalle D., More D., Athulya S., 2021, **SAFAR-High Resolution Gridded Emissions Inventory of Pune, Pimpri and Chinchwad Regions: System of Air Quality and Weather Forecasting and Research (SAFAR)- Pune**, Special Scientific Report: SAFAR-Pune-2020
3. Chakraborty S., Datye A., Murkute C., Halder Subrota, Parekh A., Sinha N., Mohan P.M., 2021, Application of precipitation isotopes in pursuit of paleomonsoon reconstruction: An Indian perspective, Chapter 16 in: Kumaran N., Damodaran P. (eds.), **Holocene Climate Change and Environment,** 1st Ed., 413-427
4. Chowdary J.S, Perakh A., Gnanaseelan C. (eds), 2021, **Indian Summer Monsoon Variability: El Niño-Teleconnections and Beyond**, Elsevier – Netherlands, ISBN: 9780128224021
5. Deb Burman P.K., 2021, Estimation of Net Primary Productivity: An Introduction to Different Approaches, Chapter in Shit P.K., Pourghasemi H.R., Das P., Bhunia G.S. (eds) **Spatial Modelling in Forest Resources Management**, Springer, Switzerland; DOI:10.1007/978-3-030-56542-8_2, 33-69
6. Gadgil S., Francis P.A., Rajendran K., Nanjundiah R.S., Rao S.A., 2021, Role of land-ocean contrast in the indian summer monsoon rainfall, Chapter 1 in: Chang C-P., Ha K-J., Johnson R.H., Kim D., Lau G.N.C., Wang B. (eds) **Multiscale Global Monsoon System**, World

Scientific Series on Asia-Pacific Weather and Climate, DOI:10.1142/9789811216602_0001, 3-12
7. Garcia-Soto C., Breitburg D., … Roxy M.K. and co-authors, 2021, Pressures from changes in climate and atmosphere, Chapter 9 in: The Second World Ocean Assessment, Vol. II, April 2021, United Nations, 55-75
8. Guhathakurta P., Wagh N., 2021, Observed Climate Change Over India and Its Impact on Hydrological Sectors, In: Pandey A., Kumar S., Kumar A. (eds) **Hydrological Aspects of Climate Change**, Springer Transactions in Civil and Environmental Engineering, DOI: 10.1007/978-981-16-0394-5_5, 93-122
9. Gupta A., Choudhary H., Singh A.K., Prabhakaran Thara, Dixit S.A., 2021, Scale-Aware Overlap in Turbulent Wall Jets, In: Venkatakrishnan L., Majumdar S., Subramanian G., Bhat G.S., Dasgupta R., Arakeri J. (eds), **Proceedings of 16th Asian Congress of Fluid Mechanics**, Lecture Notes in Mechanical Engineering, February 2021, https://doi.org/10.1007/978-981-15-5183-3_28, 257-266
10. Kaushik A., Attri S.D., Kaushik C.P., Schnell R., 2021, Climate Resilience and Environmental Sustainability Approaches: An Introduction, In: Kaushik A., Kaushik C.P., Attri S.D. (eds) **Climate Resilience and Environmental Sustainability Approaches: Global Lessons and local Challenges**, Springer Nature, DOI:10.1007/978-981-16-0902-2_1, 1-8
11. Kaushik A., Kaushik C.P., Attri S.D., 2021, **Climate Resilience and Environmental Sustainability Approaches: Global Lessons and Local Challenges, Springer Nature,** ISBN: 978-981-16-0902-2
12. Mahapatra S., 2021, India's "Monsoon Mission": great success through combined and coordinated efforts, **Bulletin of IMSP (BIMSP)**, 20, 18-27
13. Mahapatra S., 2021, International Monsoons Project Office (IMPO) at IITM Pune, **Bulletin of IMSP (BIMSP)**, 20, 19 -21
14. Mandke S.K., 2021, Some aspects of the weak rainfall spells of the Indian summer monsoon 2018, in Astakhova E. (eds), **WGNE Blue Book: Research Activities in Earth System Modelling**, Report No. 51, WCRP Report No.4/2021., WMO, Geneva, 2-11
15. Mandke S.K., Prabhu A., 2021, Eurasian winter snow variability in the future warming scenarios of CCSM4/CMIP5, in Astakhova E. (eds), **WGNE Blue Book: Research Activities in Earth System Modelling**, Report No. 51. WCRP Report No.4/2021., WMO, Geneva, 7-11
16. Metya Abirlal, Deb Burman P.K., Chakraborty S., 2021, Carbon cycle study in the Kaziranga National Park reveals a unique characteristic of the prevailing forest ecosystem, **Bulletin of IMSP (BIMSP)**, 20, 7-13
17. Mohapatra M., 2021, **Annual Lightning Report 2020-2021**
18. Plummer D., Nagashima T., Tilmes S., Archibald A., Chiodo G., Fadnavis S., Garny H., … et al., 2021, CCMI-2022: A new set of Chemistry-Climate Model Initiative (CCMI) Community Simulations to Update the Assessment of Models and Support Upcoming Ozone Assessment Activities, **Stratosphere-Troposphere Processes and Their Role in Climate (SPARC) Newsletter**, No. 57, 22-30
19. Prabhu A., Mandke S.K., 2021, Relation of Eurasian snow with regional India summer monsoon rainfall, in Astakhova E. (eds), **WGNE Blue Book: Research Activities in Earth System Modelling**, Report No. 51, WCRP Report No.4/2021., WMO, Geneva, 2-21
20. Sahai A.K., Kaur Manpreet, Phani R., Joseph S., Mandal R., Dey A., Chattopadhyay R., 2021, Sub-seasonal to Seasonal Prediction System for the Indian Summer monsoon, **S2S Newsletter** No. 16, 8-10, http://s2sprediction.net/file/newsletter/Newsletter%2016_Mar%202021.pdf
21. Singh A.K., Tripathi J.N., Taloo, A.K., Kotlia B.V.S., Singh K.K., Attri S.D., 2021, Seasonal Ground Water Fluctuation Monitoring Using GRACE Satellite Technology Over Punjab and Haryana During 2005–2015, In: Taloor A.K., Kotlia B.S., Kumar K. (eds) **Water, Cryosphere, and Climate Change in the Himalayas**, DOI:10.1007/978-3-030-67932-3_11, 175-186

22. Singh Atar, Kumar Rajesh, Kumar Ramesh, Singh K.K., Randhawa S. Singh, 2021, Quantification of volume loss and snout retreat from 1980 to 2019 of baspa basin glaciers, western himalaya, **Materials Today: Proceedings,** DOI:10.1016/j.matpr.2021.01.141
23. Tiwari S., Chen B., Singh S., Singh A.K., Srivastava A.K., 2021, Impact of black carbon on environment and health, Book chapter 5 in Hussain (ed) **Functionalized Nanomaterials based Devices for Environmental Applications**, Ist Ed., Elsevier Publication, https://doi.org/10.1016/B978-0-12-822245-4.00007-6, 107-125
24. महापात्रा सोमनाथ, 2021, **कोरोना महामारी- हम भारतीयों के लिए आपदा या अवसर** ?, **एनसीएल-आलोक**, 20-21

OSMART

(CMLRE+NCCR+INCOIS+NIOT)

1. Abdul Jaleel K.U., Parameswaran U.V., Gopal A., Khader C., Sanjeevan V.N., Vijayan A.K., Gupta G.V.M., 2021, Response of macrozoobenthic communities to summer monsoon upwelling and related hypoxia in the south eastern Arabian Sea shelf, **Marine Environmental Research**, 166: 105278, 1-10
2. Afroosa M., Rohith B., Paul A. Durand F., Roman B.B., Sreedeivi P.V., Olivier de V., Ballu V., Shenoi S.S.C., 2021, Madden-Julian oscillation winds excite an intraseasonal see-saw of ocean mass that affects Earth's polar motion, **Communications Earth & Environment**, 2, 139
3. Aggarwal R., Ugail H., Jha R.K., 2021, A deep artificial neural network architecture for mesh free solutions of nonlinear boundary value problems, **Applied Intelligence**, DOI:10.1007/s10489-021-02474-4
4. Akhand A., Chanda A., Watanabe K., Das S., Tokoro T., Chakraborty K., Hazra S., Kuwae T., 2021, Low CO_2 evasion rate from the mangrove-surrounding waters of the Sundarbans, **Biogeochemistry**, 153, 1, DOI:10.1007/s10533-021-00769-9, 95-114
5. Akhand A., Watanabe K., Chanda A., Tokoro T., Chakraborty K., Moki H., Tanaya T., Ghosh J., Kuwae T., 2021, Lateral carbon fluxes and CO2 evasion from a subtropical mangrove-seagrass-coral continuum, **Science of the Total Environment**, 752, 142190, DOI:10.1016/j.scitotenv.2020.142190
6. Anburajan L., Meena B., Vinithkumar N.V., Dharani G., 2021, Molecular characterization of glycine betaine biosynthesis genes from deep sea halophilic bacteria, *Bacillus atrophaeus* NIOT-DSB21, **Ecological Genetics and Genomics**, 18: 100080, DOI: 10.1016/j.egg.2021.100080.
7. Asha Devi C.R., Vimalkumar K.G., Padmakumar K.B., Thomas L.C., Maneesh T.P., Sudhakar M., 2021, Understanding the microzooplankton mediated food web of the winter-spring Noctiluca bloom in the Northeastern Arabian Sea Ecosystem, **Regional Studies in Marine Science**, 42: 101623

8. Balaji Dilli, Velraj R., Ramanamurthy M.V., 2021, CFD studies on the influence of un-wetted area on the heat transfer performance of the horizontal tube falling film evaporation, **Thermal Science**, DOI:10.2298/TSCI200414056B, 56-56.
9. Baliarsingh S.K., Lotliker A.A., Srichandan S., Basu A., Balakrishnan Nair T.M., Tripathy, S.K., 2021, Effect of Tidal Cycle on Escherichia coli Variability in a Tropical Estuary, **Bulletin of Environmental Contamination and Toxicology**, 106, 4, DOI:10.1007/s00128-021-03106-w, 622-628
10. Baliarsingh S.K., Lotliker A.A., Srichandan S., Parida C., Rajdeep Roy R., ChandrasekharNaik, Balakrishnan Nair T.M., Barik K.K., 2021, Response of coastal phytoplankton pigment composition to tropical cyclone Fani, **Marine Pollution Bulletin**, 173: 113038 DOI:10.1016/j.marpolbul.2021.113038
11. Baliarsingh S.K., Lotliker A.A., Srichandan S., Roy R., Sahu B.K., Samanta A., Balakrishnan Nair T.M., Acharyya T., Parida C., Singh S., Jena A.K., 2021, Evaluation of hydro-biological parameters in response to semi-diurnal tides in a tropical estuary, **Ecohydrology and Hydrobiology**, DOI:10.1016/j.ecohyd.2021.03.002
12. Bhuyan D.P., Mandal S., Ray A., Sil S., Venkatesan R., 2021, Surface and Subsurface Signatures of Monsoon Intra-seasonal Oscillations from Moored Buoys Observation in the Bay of Bengal, **Dynamics of Atmospheres and Oceans**, 95: 101240, DOI:10.1016/j.dynatmoce.2021.101240.
13. Chachin Vishal C.V., Krishnan J., Venkatesan G., Raphael V.S.P., Jalihal P., 2021, Dynamic analysis of Direct steam generating parabolic trough collector system, **Journal of Energy Resource Technology**, 143: 031304, 3, 1-13.
14. Chakraborty K., Valsala V., Bhattacharya T., Ghosh J., 2021, Seasonal cycle of surface ocean pCO2 and pH in the northern Indian Ocean and their controlling factors, **Progress in Oceanography**, 198: 102683, DOI:10.1016/j.pocean.2021.102683
15. Chandrasekar K., Saravananae N., Cubelio S.S., Sudhakar M., 2021, Live observation of great blue whale (*Balaenoptera musculus*) from northern Arabian Sea, off Gujarat, **Current Science**, 120, 3, 470-471
16. Chatterjee M., Shankar D., Vijith V., Sen G.K., Sundar D., Michael G.S., Amol P., Chatterjee A., Sanyal P., Chatterjee S., Basu A., Chakraborti S., Mishra S.K., Suprit K., Mukherjee D., Mukherjee A., Mukhopadhyay S., Mondal G., Kalla A., Das M., 2021, Variation of salinity in the Sundarbans Estuarine System during the Equinoctial Spring tidal phase of March 2011, **Journal of Earth System Science**, 130: 150, 3, DOI:10.1007/s12040-021-01636-9,
17. Das A.K., Sharma A., Joseph S., Srivastava A., Pattanaik D.R., 2021, Comparative performance of hwrf model coupled with pom and hycom for tropical cyclones over north indian ocean, **Mausam**, 72, 1, 147-166
18. Devaraj D., Roselyn J.P., Nithya C., Chandran C.P., Venkatesan R., 2021, Development and Implementation of Modified Power Loss Detection Algorithm for Partial Shading in Real-time Photovoltaic System, **IEEJ Journal of Industry Applications**, DOI:10.1541/ieejjia.21003506.
19. Dixit S., Hashim M., Saravanane N., 2021, A rare polyclad genus Bulaceros (Platyhelminthes: Polycladida: Pseudocerotidae): new species and new record from Indian coral atolls, **Marine Biology Research**, 16, 8-9, 632-642
20. Dixit S., Hashim M., Saravanane N., 2021, Two new Pseudoceros (Platyhelminthes: Polycladida: Pseudocerotidae) from Agatti Island, India, and a species checklist from Indian waters, **Journal of the Marine Biological Association of the United Kingdom**, 101, 2, 1-11
21. Ganesh Kumar A., Manisha D., Sujitha K., Magesh Peter, Kirubagaran R., Dharani G., 2021, Genome sequence analysis of deep sea *Aspergillus sydowii* BOBA1 and effect of high pressure on biodegradation of spent engine oil, **Scientific Reports**, 11: 9347, DOI: 10.1038/s41598-021-88525-9.

22. Garlapati D., Charankumar B., Muthukumar C., Madeswaran P., Ramu K., Murthy M.V.R., 2021, Using the environmental DNA (eDNA) as a tool to assess the bacterial diversity, and composition at anthropogenically active sites, **Marine Pollution Bulletin,** 170: 112593
23. Garlapati D., Kumaraswami M., Ranga Rao V., Ramu K., Murthy M.V.R., 2021, Distribution patterns and seasonal variations in phytoplankton communities of the hypersaline Pulicat lagoon, India, **Environmental Science and Pollution Research**, DOI:10.1007/s11356-021-15086-9
24. Gera A., Kumaraswami M., Ranga Rao V., Vijay A., Pandiyarajan R.S., Ezhilarasan P., Ramana Murthy M.V., 2021, The Pulicat, a distinctive shallow lagoon: Hypersalinity, thermodynamics and meromixis, **Estuarine Coastal and Shelf Science**, 252: 107292, DOI:10.1016/j.ecss.2021.107292
25. Ghosh J., Chakraborty K., Chanda A., Akhand A., Bhattacharya T., Das S., Das I., Hazra S., Choudhury S.B., Wells M., 2021, Outwelling of total alkalinity and dissolved inorganic carbon from the Hooghly River to the adjacent coastal Bay of Bengal, **Environmental Monitoring and Assessment**, 193: 415, 7, DOI:10.1007/s10661-021-09191-y
26. Giri S., Chanda A., Mondal P.P., Samanta S., Chakraborty K., Maity S., Hazra S., 2021, Role of biogeochemical parameters in delineating suitable habitats of juvenile Hilsa (Tenualosailisha) within an estuary, **Environmental Biology of Fishes**, 104, 9, DOI:10.1007/s10641-021-01134-3, 1057-1072
27. Girishkumar M.S., Joseph J., McPhaden M.J., Ram Rao E.P., 2021, Atmospheric Cold Pools and Their Influence on Sea Surface Temperature in the Bay of Bengal, **Journal of Geophysical Research: Oceans,** 126: e2021JC017297, 9, DOI:10.1029/2021JC017297
28. Goswami P., Vinithkumar N.V., Dharani G., 2021, Microplastics particles in seafloor sediments along the Arabian Sea and the Andaman Sea continental shelves: First insight on the occurrence, identification and characterization, **Marine Pollution Bulletin**, 167: 112311.
29. Gupta G.V.M., Jyothibabu R., Ramu C.V., Reddy A.Y., Balachandran K.K., Sudheesh V., Kumar S., Chari N.V.H.K., Bepari K.F., Marathe P.H., Reddy B.B., Vijayan A.K., 2021, The world's largest coastal deoxygenation zone is not anthropogenically driven, **Environmental Research Letters**, 16: 054009, 5, 1-12
30. Holmes E.E., Smitha B.R., Kumar N., Maity S., Checkley D.M., Mark L., 2021, Improving landings forecasts using environmental covariates: a case study on the Indian oil sardine (Sardinella longiceps), **Fisheries Oceanography**, 30, DOI:10.1111/fog.12541, 623-642
31. Holmes E.E., Smitha B.R., Nimit K., Maity S., Checkley D.M., Jr. Wells M.L., Trainer V.L., 2021, Improving landings forecasts using environmental covariates: A case study on the Indian oil sardine (Sardinella longiceps), **Fisheries Oceanography**, 30, 6, DOI:10.1111/fog.12541, 623-642
32. Jain Vineet, Shankar D., Vinayachandran P.N., Mukherjee A., Amol P., 2021, Role of ocean dynamics in the evolution of mixed-layer temperature in the Bay of Bengal during the summer monsoon, **Ocean Modelling**, 168, 101895, DOI:10.1016/j.ocemod.2021.101895
33. Jayaram C., Pavan Kumar J., Udaya Bhaskar T.V.S., Bhavani I.V.G., Prasad Rao T.D.V., Nagamani P.V., 2021, Reconstruction of Gap-Free OCM-2 Chlorophyll-a Concentration Using DINEOF, **Journal of the Indian Society of Remote Sensing**, 49, 6, DOI:10.1007/s12524-021-01317-6, 1419-1425
34. Jayaram C., Udaya Bhaskar T.V.S., Chacko N., Prakash S., Rao K.H., 2021, Spatio-temporal variability of chlorophyll in the northern Indian Ocean: A biogeochemical argo data perspective, **Deep-Sea Research Part II: Topical Studies in Oceanography**, 183: 104928, DOI:10.1016/j.dsr2.2021.104928
35. Jeba Kumar J.P.P., Ragumaran S., Nandagopal G., Ravichandran V., Mallavarapu R.M., Missimer T.M., 2021, Green method of stemming the tide of invasive marine and freshwater organisms by natural filtration of shipping ballast water, **Environmental Science and Pollution Research**, 28, 5, 5116-5125.

36. Jha Dilip Kumar, Dharani G., Verma Pankaj, Ratnam Krupa, Sendhil Kumar R., Rajaguru S., 2021, Evaluation of factors influencing the trace metals in Puducherry and Diu coasts of India through multivariate techniques, **Marine Pollution Bulletin**, 167, 112342.
37. Jha R.K., Udaya Bhaskar T.V.S., 2021, Optimal parameters for generation of gridded product of Argo temperature and salinity using DIVA**, Journal of Earth System Science,** 130: 170, 3, DOI:10.1007/s12040-021-01675-2
38. Joshi G., Meena B., Verma P., Nayak J., Vinithkumar V.N., Dharani G., 2021, Deep sea mercury resistant bacteria from the Central Indian Ocean: a potential candidate for mercury bioremediation, **Marine Pollution Bulletin**, 169: 112549.
39. Jyothi V.B.N., Ramesh R., Vedachalam N., Ramadass G.A., 2021, Assessment of technological maturity of manned submersible navigation and positioning systems, **Marine Technology Society Journal**, 55, DOI:10.4031/MTSJ.55.5.4, 129-137.
40. Jyotibabu R., Balachandran K.K., Jagadeesan L., Karnan C., Gupta G.V.M., Chakraborty K., Sahu K.C., 2021, Why the Gulf of Mannar is a Marine Biological Paradise?, **Environmental Science and Pollution Research**, 28, 64892–64907
41. Karati K.K., Asha Devi C.R., Chari N.V.H.K., Sudheesh V., Kumaraswamy M., Naidu S.A., Ramanamurthy M.V., 2021, Hydrodynamic variability and nutrient status structuring the mesozooplankton community of the estuaries along the west coast of India, **Environmental Science and Pollution Research**, 28, 42477–42495
42. Karati K.K., Ashadevi C.R., Harikrishnachari N.V., Valliyodan S., Kumaraswami M., Naidu S.A., Murthy M.V.R., 2021, Hydrodynamic variability and nutrient status structuring the mesozooplankton community of the estuaries along the west coast of India, **Environmental Science and Pollution Research**, DOI:10.1007/s11356-021-13634-x, 1-19
43. Karthikeyan P., Marigoudar S.R., Mohan D., Sharma K.V., Ramana Murthy M.V., 2021, Prescribing sea water quality criteria for arsenic, cadmium and lead through species sensitivity distribution, **Ecotoxicology and Environmental Safety**, 208, 111612
44. Karthikeyan P., Raja P., Kunguma Kannika M., Marigoudar S.R., Sharma K.V., 2021, Flouroscein diacetate hydrolysis assay on hepacticoid copepod Tisbe furcata as a new rapid bioassay to assess marine sediment quality, **Journal of Earth System Science**, 130: 141, 1-13
45. Kuttippurath J., Murasingh S., Stott P.A., Sarojini B.B., Jha M.K., Kumar P., Nair P.J., Varikoden H., Raj S., Francis P.A., Pandey P.C., 2021, Observed rainfall changes in the past century (1901–2019) over the wettest place on Earth, **Environmental Research Letters**, 16, 2, 024018, DOI:10.1088/1748-9326/abcf78
46. Kuttippurath J., Sunanda N., Martin M.V., Chakraborty K., 2021, Tropical storms trigger phytoplankton blooms in the deserts of north Indian Ocean, **npj Climate and Atmospheric Science**, 4: 11, 1, DOI:10.1038/s41612-021-00166-x
47. Lakshmi R.S., Prakash S., Lotliker A.A., Baliarsingh S.K., Samanta A., Mathew T., Chatterjee A., Sahu B.K., Balakrishnan Nair T.M., 2021, Physicochemical controls on the initiation of phytoplankton bloom during the winter monsoon in the Arabian Sea, **Scientific Reports**, 11: 13448, 1, DOI:10.1038/s41598-021-92897-3
48. Latha G., … et.al., 2021, Arctic soundscapes-seals, sails and ice, **Current Science**, 120, 1, 12-15.
49. Lotliker A.A., Baliarsingh S.K., Shesu R.V., Samanta A., Naik R.C., Balakrishnan Nair T.M., 2021, Did the Coronavirus Disease 2019 Lockdown Phase Influence Coastal Water Quality Parameters off Major Indian Cities and River Basins?, **Frontiers in Marine Science**, 8: 648166, DOI:10.3389/fmars.2021.648166
50. Mahendra R.S., Mohanty P.C., Francis P.A., Joseph S., Balakrishnan Nair T.M., Srinivas Kumar T., 2021, Holistic approach to assess the coastal vulnerability to oceanogenic multi-hazards along the coast of Andhra Pradesh, India, **Environmental Earth Sciences**, 80: 651, 18, DOI:10.1007/s12665-021-09920-z

51. Malarkodi A., Latha G., Srinivasan S., 2021, Passive time reversal acoustics for horizontal shallow water acoustic communication to mitigate the effect of intersymbol interference, **Applied Acoustics**, 174: 107783, 1-7.
52. Manche S.S., Nayak R.K., Mohanty P.C., Shesasai M.V.R., Dadhwal V.K., 2021, Assessment of mass-induced sea level variability in the Tropical Indian Ocean based on GRACE and altimeter observations, **Journal of Geodesy**, 95: 19, 2, DOI:10.1007/s00190-021-01471-2
53. Mandal S., Behera N., Gangopadhyay A., Susanto R.D., Pandey P.C., 2021, Evidence of a chlorophyll "tongue" in the Malacca Strait from satellite observations, **Journal of Marine Systems**, 223: 103610, DOI:10.1016/j.jmarsys.2021.103610
54. Manickavasagam S., Shukla S.P., Kumar S., Kumar K., Bhuvaneswari R., 2021, Assessment of marine microplastics in floating plastic debris using a fixed sampling device: the example of South Juhu creek, Mumbai coast, India, **Journal of Coastal Conservation**, 25: 20, 1, DOI:10.1007/s11852-021-00810-x
55. Mary Leema J.T., Persia Jothy T., Magesh Peter D., Kumar T.S., Dharani G., 2021, A critical look into different salt removal treatments for the production of high value pigments and fatty acids from marine microalgae *Chlorella vulgaris* (NIOT-74), **Biotechnology Reports**, 30: e00627, DOI:10.1016/j.btre.2021.e00627
56. Mathew A.E., Sujith Kumar S., Vivek G., Iyyappan M., Karthika R., Dinesh Kumar P., Dash S.K., Gopinath G., Usha T., 2021, Flood impact assessment using field investigations and post-flood survey, **Journal of Earth System Sciences**, 130:147, DOI:10.1007/s12040-021-01657-4
57. Mathew T., Prakash S., Baliarsingh S.K., Samanta A., Lakshmi R.S., Lotliker A.A., Chatterjee A., Balakrishnan Nair T.M., 2021, Response of phytoplankton biomass to nutrient stoichiometry in coastal waters of the western Bay of Bengal, **Ecological Indicators**, 131: 108119, DOI:10.1016/j.ecolind.2021.108119
58. Mathew T., Prakash S., Shenoy L., Chatterjee A., Udaya Bhaskar T.V.S., Wojtasiewicz B., 2021, Observed variability of monsoon blooms in the north-central Arabian Sea and its implication on oxygen concentration: A bio-argo study, **Deep-Sea Research Part II: Topical Studies in Oceanography**, 184-185: 104935, DOI:10.1016/j.dsr2.2021.104935
59. Meena B., Anburajan L., Nitharsan K., Vinithkumar N.V., Dharani G., 2021, Existence in cellulose shelters: industrial and pharmaceutical leads of symbiotic actinobacteria from ascidian Phallusianigra, Andaman Islands, **World Journal of Microbiology and Biotechnology**, 37: 120, DOI:10.1007/s11274-021-03090-7
60. Meena B., Anburajan L., Vinithkumar N.V., Kirubagaran R., Dharani G., 2021, Molecular characterization, phylogenetic and in *silico* sequence analysis of trehalose biosynthesis genes; *otsA* and *otsB* from the deep sea halophilicactino bacteria, *Streptomyces qinglanensis* NIOT-DSA$_{03}$, **Data in Brief**, 35: 106727, DOI:10.1016/j.dib.2021.106727.
61. Miranda J., Lotliker A.A., Baliarsingh S.K., Jena A.K., Samanta A., Sahu K.C., Srinivasa Kumar T., 2021, Satellite estimates of the long-term trend in phytoplankton size classes in the coastal waters of north-western Bay of Bengal, **Oceanologia**, 63, 1, DOI:10.1016/j.oceano.2020.09.003, 40-50
62. Mishra S., Sahoo S., Pandey S., 2021, Research trends in online distance learning during the COVID-19 pandemic, **Distance Education**, 42, DOI:10.1080/01587919.2021.1986373
63. Modi A., Balakrishnan Nair T.M., Remya P.G., Harikumar R., Srinivas K., Srinivas G., 2021, The role of anomalous oceanic features on enhancing flooding duration in Kuttanad region, Kerala (India), **Journal of Earth System Science**, 130: 111, 2, DOI:10.1007/s12040-021-01599-x
64. Modi A., Munaka S.K., Harikumar R., Balakrishnan Nair T.M., Srinivas K., 2021, Evaluation of Winds from SCATSAT-1 and ASCAT Using Buoys in the Indian Ocean, **Journal of the Indian Society of Remote Sensing**, 49, 8, DOI:10.1007/s12524-021-01335-4, 1915-1925

65. Mohanty P.C., Kushabaha A., Mahendra R.S., Nayak R.K., Sahu B.K., Rama Rao E.P., Srinivasa Kumar T., 2021, Persistence of marine heat waves for coral bleaching and their spectral characteristics around Andaman coral reef, **Environmental Monitoring and Assessment**, 193: 491, 8, DOI:10.1007/s10661-021-09264-y
66. Mohanty P.C., Shetty S., Mahendra R.S., Nayak R.K., Sharma L.K., Rama Rao E.P., 2021, Spatio-temporal changes of mangrove cover and its impact on bio-carbon flux along the West Bengal coast, Northeast coast of India, **European Journal of Remote Sensing**, 54, 1, DOI:10.1080/22797254.2021.1977183, 524-536
67. Murali B., Ravichandran M., Girishkumar M.S., Bharathi G., 2021, Role of equatorial indian ocean convection on the Indian summer monsoon, **Mausam**, 72, 2, 457-462
68. Murthy M.V.R., Usha T., Kankara R.S., 2021, Three decades of Indian remote sensing in coastal research, **Journal of Indian Society of Remote Sensing,** DOI:10.1007/s12524-021-01342-5
69. Naidu S.A., Mawii L., Ranga Rao V., Anitha G., Mishra P., Narayanaswamy B.E., Vijayan A.K., Ramana Murthy M.V., Gupta G.V.M., 2021, Characterization of plastic debris from surface waters of the eastern Arabian Sea–Indian Ocean, **Marine Pollution Bulletin**, 169: 112468, 1-9
70. Naidu S.A., Mawii L., Ranga Rao V., Anitha G., Mishra P., Narayanaswamy B.E., Anil Kumar V., Ramana Murthy M.V., Gupta G.V.M., 2021, Characterization of plastic debris from surface waters of the eastern Arabian Sea-Indian Ocean, **Marine pollution bulletin,** 169: 112468
71. Nair P.J., Varikoden H., Francis P.A., Chakraborty A., Pandey P.C., 2021, Atmospheric moisture as a proxy for the ISMR variability and associated extreme weather events, **Environmental Research Letters**, 16: 014045, 1, DOI:10.1088/1748-9326/abcfe0
72. Natarajan L., Sivagnanam N., Usha T., Chokkalingam L., Sundar S., Gowrappan M., Roy P.D., 2021, Shoreline changes over last five decades and predictions for 2030 and 2040: a case study from Cuddalore, southeast coast of India, **Earth Science Informatics,** 14, 1315-1325
73. Natarajan L., Usha T., Gowrappan M., Kasthuri B.P., Moorthy P., Chokkalingam L., 2021, Flood susceptibility analysis in Chennai Corporation using frequency ratio model, **Journal of the Indian Society of Remote Sensing,** 49, 1533-1543
74. Neethu K.V., Saranya K.S., Krishna N.G.A., Praved P.H., Aneesh B.P., Nandan S.B., Marigoudar S.R., 2021, Toxicity of copper on marine diatoms, Chaetoceros calcitrans and Nitzchia closterium from Cochin estuary, India, **Ecotoxicology,** 30, 783-793
75. Nimalan K., Thanikachalam M., Usha T., 2021, Development of spectral library for coral reef benthic compositions in Gulf of Mannar, **Regional Studies in Marine Science,** 47, 101978
76. Nimalan K., Thanikachalam M., Usha T., 2021, Identification of specific wavelength regions for separating optically similar signals of coral reef benthic compositions, **Earth Science Informatics,** 14, DOI:10.1007/s12145-021-00699-y, 2309–2315
77. Nimalan K., Thanikachalam M., Usha T., 2021, Spectral characteristics of coral reef benthic compositions in Gulf of Mannar, **Journal of Earth System Science,** 130: 58, 1-7
78. Nimit K., 2021, Ideas and perspectives: Ushering the Indian Ocean into the un Decade of Ocean Science for Sustainable Development (UNDOSSD) through marine ecosystem research and operational services-an early career's take, **Biogeosciences**, 18, 12, DOI:10.5194/bg-18-3631-2021, 3631-3635
79. Noufal K.K., Ramesh R., Latha G., 2021, Observation and Modeling approach in acoustic propagation in the shallow waters of south west Bay of Bengal, **Indian Journal of Geo Marine sciences**, 50, 3, 177-186.
80. Padhi S.K., Patro S., Sahu B.K., Baliarsingh S.K., Sahu K.C., 2021, A preliminary study on the environmental factors triggering frequent bloom of diatom Asterionellopsis glacialis Castracane) Round 1990 along west coast of Bay of Bengal, **Indian Journal of Geo-Marine Sciences**, 50, 7, 533-541
81. Pandi S.R., Chari N.V.H.K., Sarma N.S., Lotliker A.A., Tripathy S.C., Bajish C.C., 2021, Spatiotemporal variability in the optical characteristics of dissolved organic matter in the coastal

Bay of Bengal, **International Journal of Environmental Science and Technology**, DOI:10.1007/s13762-021-03605-7

82. Parameswaran U.V., Gopal A., Abdul Jaleel K.U., Saravanane N., 2021, Nine new records of brittle stars (Echinodermata: Ophiuroidea) from Indian waters, **Marine Biology Research**, 17, DOI: 10.1080/17451000.2021.1967995, 1-20
83. Paul B., Baduru B., Paul A., Francis P.A., Shetye S.R., 2021, Absence of the annual cycle in shelf current inshore of the East Indian Coastal Current, **Continental Shelf Research**, 215: 104355, DOI:10.1016/j.csr.2021.104355
84. Pearlman Jay, Buttigieg P.L., Bushnell M., Delgado C., Hermes J., Heslop E., Hörstmann C., Isensee K., Karstensen J., Lambert A., Lara-Lopez A., Muller-Karger F., Munoz Mas C., Pearlman F., Pissierssens P., Przeslawski R., Simpson P., van Stavel J., Venkatesan R., 2021, Evolving and Sustaining Ocean Best Practices to Enable Interoperability in the UN Decade of Ocean Science for Sustainable Development, Frontiers **in Marine Science**, 8:458, DOI:10.3389/fmars.2021.619685.
85. Perumal V., Murugaiyan S.K., Ravichandran P., Venkatesan R., Sundar R., 2021, Real Time Identification of Anomalous Event in Coastal Regions using Deep Learning techniques, **Concurrency and Computation: Practice and Experience**, 33: e6421, 21, https://doi.org/10.1002/cpe.6421.
86. Peter R., Kuttippurath J., Chakraborty K., Sunanda N., 2021, Temporal evolution of mid-tropospheric CO2 over the Indian Ocean, **Atmospheric Environment**, 257: 118475, DOI:10.1016/j.atmosenv.2021.118475
87. Pottapinjara V., Roxy M.K., Girishkumar M.S., Ashok K., Joseph S., Ravichandran M., Murtugudde R., 2021, Simulation of interannual relationship between the Atlantic zonal mode and Indian summer monsoon in CFSv2, **Climate Dynamics**, 57, 1-2, DOI:10.1007/s00382-021-05712-0, 353-373
88. Praveen Kumar B., D'Asaro E., Sureshkumar N., Rama Rao E.P., Ravichandran M., 2021, Thorpe Turbulence Scaling in Nighttime Convective Surface Layers in the North Indian Ocean, **Journal of Physical Oceanography**, 51, 10, DOI:10.1175/JPO-D-21-0017.1, 3203-3216
89. Priyanka S., Kirubagaran R., Mary Leema J.T., 2021, Optimization of ultrasound-assisted extraction (UAE) of zeaxanthin from marine microalgae Dunaliella tertiolecta (NIOT 141) using response surface methodology, **Research Journal of Pharmacy and Technology**, 14, 3, 1729-1735.
90. Rajaprabhu G., Kirubagaran R., Rasheeda M.K., Sendhil Kumar R., Dharani G., 2021, Occurrence of Vibriosis in Asian sea bass (Lates calcarifer) cultured in open sea cages, **Research Journal of Biotechnology**, 16, 4, 67-74.
91. Rajaprabhu G., Kirubagaran R., Sureshkumar C., Santhanakumar J., Rasheeda M.K., Sendhil Kumar R., Dharani G., 2021, Community-Based Cobia *Rachycentron canadum* (Linnaeus, 1766) Culture in Open Sea Cages at Olaikuda, Pamban Island, India - An Economic Analysis of the Technology Transfer Initiative, **Asian Fisheries Sciences**, 34:138–144.
92. Rajaprabhua G., Kirubagarana R., Santhanakumara J., Sendhil Kumara R., Dharani G., 2021, Short term culture of wild caught juvenile rabbit fishes *(Siganus javus)* in open sea cages at Palk Bay, **Indian Journal of Science and Technology**, 14, 12, 990-998.
93. Rajasree B.R., Behera M.R., Kankara R.S., 2021, Numerical assessment of climatological trends for annual and seasonal wave characteristics during recent 41 years, **Climate Dynamics**, DOI:10.1007/s00382-021-05956-w, 1-22
94. Rajeeshkumar M.P., Rajeev R., Hashim M., Saravanane N., 2021, New Distributional Record of *Peristedion liorhynchus* (Scorpaeniformes: Peristediidae) From Central Indian Ocean, **Thalassas: An International Journal of Marine Sciences**, 37, 739–743
95. Ramachandran N.., Aneesh Kumar K.V., Oxona K., Rajeeshkumar M.P., Bineesh K.K., Midhunshah Hussain, Hashim M., Saravanane N., Sudhakar M., 2021, Differentiation of two

Chlorophthalmus species *Chlorophthalmus corniger* (Alcock, 1894) and *C. nigromarginatus* (Kamohara, 1953) based on otolith morphometry, **Indian Journal of Geo-Marine Sciences**, 50, 6, 489-497

96. Ramesh C.H., Koushik S., Shunmugaraj T., Murthy M.V.R., 2021, Crustose coralline algae (Corallinales: Rhodophyta) diversity in the Gulf of Mannar Marine National Park, Southern India, **Indian Journal of Geo Marine Science,** 50, 3, 241-245
97. Ramesh C.H., Koushik S., Shunmugaraj T., Murthy M.V.R., 2021, Mass mortality of regular sea urchin Salmacis virgulata L. Agassiz and Desor, 1846 at Dhanushkodi, Southeast coast of Tamil Nadu, Gulf of Mannar, India, **Indian Journal of Geo Marine Science,** 50, 4, 343-346
98. Ramesh Ch., Koushik S., Shunmugaraj T., Murthy M.V.R., 2021, Massive blooms of Cyanobacteria *Trichodesmium erythraeum* and *Synechococcus* sp. in Mandapam Group of Islands, Southeast Coast of India, Tamil Nadu, **Hydrobiological Journal**, 57, 3, 32-36
99. Ramesh Ch., Koushik S., Shunmugaraj T., Murthy M.V.R., 2021, Occurrence of a Scyphozoan jellyfish, *Pelagia noctiluca* (Forskål, 1775) bloom in the Gulf of Mannar Marine National Park, Southern India, **Indian Journal of Geo Marine Science,** 50, 2, 161-164
100. Rasheed K., Dora G.U., Noujas V., Kankara R.S., Manikandan M., Sathish S., Arockiaraj S., 2021, A case study of coastal currents in relation with tides and winds in a tropical coastal waters of Vengurla, West Coast of India, **Indian Journal of Geo Marine Sciences**, 50, 04, 277-286
101. Retnamma J., Kalathil B.K., Loganathan J., Chinnadurai K., Gupta G.V.M., Chakraborty K., Sahu K.C., 2021, Why the Gulf of Mannar is a marine biological paradise?, **Environmental Science and Pollution Research**, DOI:10.1007/s11356-021-15530-w
102. Roy R., Vinayachandran P.N., Sarkar A., George J., Parida C., Lotliker A.A., Prakash S., Choudhury S.B., 2021, Southern Bay of Bengal: A possible hotspot for CO2 emission during the summer monsoon, **Progress in Oceanography**, 197: 102638, DOI:10.1016/j.pocean.2021.102638
103. Sadhukhan K., Ramesh C.H., Shanmugaraj T., Murthy M.V.R., 2021, Recent coral bleaching impacts in reef ecosystem of Gulf of Mannar and Palk Bay, **International Journal of Ecology and Environmental Science** 47, 179-187
104. Sadhukhan K., Ramesh CH., Shanmugaraj T., Murthy M.V.R., 2021, New record of Sphenopid Zoanthid species Palythoa tuberculosa (Esper, 1805) from Gulf of Mannar, India, **Indian Journal of Geo Marine Science**, 50, 4, 347-350
105. Sahoo S., Pandey S., 2021, Characteristics and Inter-citation Network of 100 Most Influential Studies on Ocean Acidification: A Bibliometric Analysis, **Science and Technology Libraries,** DOI:10.1080/0194262X.2021.1937772
106. Sajimol S., Chokkalingam L., Roy P.D., Usha T., 2021, Estimation of microplastics in sediments at the southernmost coast of India (Kanyakumari), **Environmental Science and Pollution Research,** 28, 15, 18495-18500
107. Santhanakumar J., Sureshkumar C., Jha Dilip Kumar, Rajaprabhu G., Venkateswaran P., Sendhil Kumar R., Dharani G., Kirubagaran R., Atamanand M.A., 2021, Comparative assessment of fish assemblages around open sea cages vis-a-vis common fishing ground, **Journal of Earth System Science**, 130:124.
108. Satish R.U.V.N., Udaya Bhaskar T.V.S., 2021, Metrics for the assessment of quantity and quality of the data by Argo floats, **Indian Journal of Geo-Marine Sciences**, 50, 3, 187-192
109. Seemanth M., Remya P.G., Bhowmick S.A., Sharma R., Balakrishnan Nair T.M., Kumar R., Chakraborty A., 2021, Implementation of altimeter data assimilation on a regional wave forecasting system and its impact on wave and swell surge forecast in the Indian Ocean, **Ocean Engineering**, 237: 109585, DOI:10.1016/j.oceaneng.2021.109585
110. Sen R., Francis P.A., Chakraborty A., Effy J.B., 2021, A numerical study on the mixed layer depth variability and its influence on the sea surface temperature during 2013–2014 in the Bay of

Bengal and Equatorial Indian Ocean, **Ocean Dynamics**, 71, 5, DOI:10.1007/s10236-021-01452-1, 527-543

111. Shafeeq M., Balchand A.N., Shah P., George G., Smitha B.R., Varghese E., Joseph A.K., Satyendranath S., Platt T., 2021, Spatio-temporal variability of chlorophyll-a in response to coastal upwelling and mesoscale eddies in the South Eastern Arabian Sea, **International Journal of Remote Sensing**, 42, 13, 4840-4867
112. Shafeeque M., George G., Akash S., Smitha B.R. Shah P., Balchand A.N., 2021, Interannual variability of Chlorophyll-a and Impact of Extreme Climatic Events in the South Eastern Arabian Sea, **Regional Studies in Marine Science**, 48: 101986, 1-31
113. Shesu R.V., Muthalagu R., Bekkam V.R., Rama Rao E.P., Jampana V., Nimit K., 2021, Ocean Fronts detection over the Bay of Bengal using changepoint algorithms – A non-parametric approach, **Oceanologia**, 63, 4, DOI:10.1016/j.oceano.2021.05.003, 438-447
114. Shesu R.V., Udaya Bhaskar T.V.S., Rama Rao E.P., Ravichandran M., Rao B.V., 2021, An improved method for quality control of in situ data from Argo floats using α convex hulls, **MethodsX**, 8: 101337, DOI:10.1016/j.mex.2021.101337
115. Singh A., Saikia D., Kumar M.R., 2021, Seismic Imaging of the Crust Beneath Arunachal Himalaya, **Journal of Geophysical Research: Solid Earth**, 126, 3, e2020JB020616, DOI:10.1029/2020JB020616
116. Sivadas S.K., Gupta G.V.M., Kumar S., Ingole B.S., 2021, Trait-based and taxonomic macrofauna community patterns in the upwelling ecosystem of the southeastern Arabian Sea, **Marine Environmental Research**, 170: 105431
117. Srichandan S., Baliarsingh S.K., Lotliker A.A., Sahu B.K., Roy R., Balakrishnan Nair T.M., 2021, Unravelling tidal effect on zooplankton community structure in a tropical estuary, **Environmental Monitoring and Assessment**, 193: 362, 6, DOI:10.1007/s10661-021-09112-z
118. Steiner Z., Sarkar A., Liu X., Berelson W.M., Adkins J.F., Achterberg E.P., Sabu P., Prakash S., Vinaychandran P.N., Byrne R.H., Turchyn A.V., 2021, On calcium-to-alkalinity anomalies in the North Pacific, Red Sea, Indian Ocean and Southern Ocean, **Geochimica et Cosmochimica Acta**, 303, DOI:10.1016/j.gca.2021.03.027, 1-14
119. Subba Rao T., Murthy P.S., Veeramani P., Narayanan D.S., Ramesh R., Jyothi B.N., Muthukumaran D., Murugesan M., Vadivelan A., Dharani G., Santhanakumar J., Ramadass G.A., 2021, Assessment of biogrowth assemblages with depth in a seawater intake system of a coastal power station, **Biofouling**, DOI:10.1080/08927014.2021.1933457.
120. Subeesh M.P., Unnikrishnan A.S., Francis P.A., 2021, Generation, propagation and dissipation of internal tides on the continental shelf and slope off the west coast of India, **Continental Shelf Research**, 214: 104321, DOI:10.1016/j.csr.2020.104321
121. Sujith S.K., Mathew A.E., Vivek G., Karthikaa R., Gopinath G., Iyyappan M., Dash S.K., Usha T., Murthy M.V.R., Sameeran G.S., Xavier A.A., Julius E., Mithun K., 2021, A Web-GIS and Mobile-Based Application for a Safe Ocean for Fishers, **Marine Technology Society Journal,** 55, 3, 50-57, 1-8
122. Sunanda N., Kuttippurath J., Peter R., Chakraborty K., Chakraborty A., 2021, Long-Term Trends and Impact of SARS-CoV-2 COVID-19 Lockdown on the Primary Productivity of the North Indian Ocean, **Frontiers in Marine Science**, 8: 669415, DOI:10.3389/fmars.2021.669415
123. Thella R, Aneesh Kumar KV, Rajeeshkumar MP, Hashim M, Saravanane N, Sudhakar M, Fricke R., 2021, New record of the dwarf dory Zenionhololepis (Goode & Bean, 1896) (Zeiformes: Zeniontidae) from Indian waters, **Indian Journal of Fisheries**, 68, 1, 109-112
124. Tiwari P., Dimri A.P., Shenoi S.C., Francis P.A., Jithin A.K., 2021, Impact of Surface forcing on simulating Sea Surface Temperature in the Indian Ocean – A study using Regional Ocean Modeling System (ROMS), **Dynamics of Atmospheres and Oceans**, 95: 101243, DOI:10.1016/j.dynatmoce.2021.101243

125. Udaya Bhaskar T.V.S., Sarma V.V.S.S., Pavan Kumar J., 2021, Potential Mechanisms Responsible for Spatial Variability in Intensity and Thickness of Oxygen Minimum Zone in the Bay of Bengal, **Journal of Geophysical Research: Biogeosciences**, 126, 6, e2021JG006341, DOI:10.1029/2021JG006341
126. Umamaheswari T., Sugumar G., Krishnan P., Ananthan P.S., Anand A., Jeevamani J.J.J., Mahendra R.S., AmaliInfantina J., Srinivasa Rao C., 2021, Vulnerability assessment of coastal fishing communities for building resilience and adaptation: Evidences from Tamil Nadu, India, **Environmental Science and Policy**, 123, DOI:10.1016/j.envsci.2021.05.009, 114-130
127. Varalakshmi P., Vasumathi N., Venkatesan R., 2021, Tropical Cyclone prediction based on multi-model fusion across Indian coastal region, **Progress in Oceanography**, 193: 102557, DOI:10.1016/j.pocean.2021.102557.
128. Vedachalam N., Ramadass G.A., 2021, Design considerations for deep-ocean scientific robotic vehicles, **Marine Technology Society Journal**, DOI: 10.4031/MTSJ.55.5.20, 231-245
129. Venkatesan R., Muthiah M.A., Vedachalam N., Vengatesan G., Ramesh K., Kesavakumar B., Thirumurugan K., 2021, Technological Trends and Significance of the Essential Ocean Variables by the Indian Moored Observatories Relevance to UN Decade of Ocean Sciences, **Marine Technology Society Journal**, 55, 3, DOI:10.4031/ MTSJ.55.3.8, 34-49
130. Venkatesan R., Ramesh K., Muthiah M.A., Vedachalam N., Murugesh P., Atmanand M.A., 2021, Estimation of Uncertainty in the Atmospheric Pressure Measurement from the Indian Ocean Moored Buoy Systems, **Marine Technology Society Journal**, 55, DOI:10.4031/MTSJ.55.1.12, 137-146
131. Venkatesan R., Vedachalam N., Vengatesan G., 2021, Quantification of ocean- atmosphere energy exchange during super cyclone Amphan in the Bay of Bengal using Indian Ocean moored observatories, **Dynamics of Atmospheres and Oceans**, 94: 101210, DOI:10.1016/j.dynatmoce.2021.101210
132. Vijay A., Munnooru K., Reghu G., Gera A., Vinjamuri R.R., Ramanamurthy M.V., 2021, Nutrient dynamics and budgeting in a semi-enclosed coastal hypersaline lagoon, **Environmental Science and Pollution Research,** DOI:10.1007/s11356-021-15334-y
133. Yesudas A., Jayachandran P.R., Parameswaran U.V., Vidyalakshmi D., Priyaja P., 2021, Report on the association of valviferan isopod SynidoteavariegataCollinge, 1917 and regular sea urchin Stomopneustesvariolaris Lamarck, 1816 from rocky subtidal regions of Vizhinjam, southwest coast of India, **Symbiosis**, 84, 105-110

Other Publications

1. Acharyya T., Sudatta B.P., Raulo S., Singh S., Srichandan S., Baliarsingh S.K., Samanta A., Lotliker A.A., 2021, A systematic review of biogeochemistry of Mahanadi river estuary: Insights and future research direction, Chapter in: Das S., Ghosh T. (eds) **Estuarine Biogeochemical Dynamics of the East Coast of India**, Springer Nature, DOI:10.1007/978-3-030-68980-3_5, 57-80
2. Jose D.M., Mandla V.R., Srinivasa Rao N., Saladi S.V.S., 2021, Development of Satellite Data-Based Multiple Regression Equations for the Estimation of Total Coliform and Petroleum Hydrocarbons Along South West Coast of India, Chapter In: Singh R.M., Sudheer K.P., Kurian B. (eds) **Advances in Civil Engineering**, Lecture Notes in Civil Engineering, 83, DOI: 10.1007/978-981-15-5644-9_37, 491-506
3. Murugesan P., Punniyamoorthy R., Mahadevan G., Ramana Murthy M.V., Venkatarama Sharma, Marigoudar S.R., 2021, **Monograph on benthic foraminifera of Tamil Nadu coastal waters, Southeast India**, CAS MB Annamalai University, Parangipettai and National Centre for Coastal Research, Ministry of Earth Sciences, Govt of India, ISBN 9789354730665, 1-239

4. Rajasekhar D., Narendrakumar D., Ananthakrishna P., Deepaksankar S., 2021, Capability Plot Study of Vessels for Dynamic Positioning Arrangements, **Marine Engineers Review: Journal of the Institute of Marine Engineers (India)**, 15, 7, 9-14.
5. Rajasekhar D., Narendrakumar D., Ananthakrishna P., Deepaksankar S., 2021, Satellite-based Observations of Shipborne Emissions along Coromandel Coast of India and its Corroboration, **Marine Engineers Review: Journal of the Institute of Marine Engineers (India)**, 15, 6, 19-25
6. Rajasekhar D., Narendrakumar D., Ananthakrishna R., Deepaksankar P.S, 2021, Viability Analysis on Interoperability of Hybrid Battery solution for a Ship, **Marine Engineers Review: Journal of the Institute of Marine Engineers (India)**, 15, 11, 9-15
7. Rajasekhar D., Narendrakumar D., Ananthakrishna R., Deepaksankar P.S., Bose P., 2021, Challenges and Foreseeable Evolution in Design and Construction of Research Ships in India, **Marine Engineers Review: Journal of the Institute of Marine Engineers (India)**, 15, 2, 16-21
8. Rajasekhar D., Narendrakumar D., Ananthakrishna, Deepaksankar P.S., Bose P., 2021, Evolving Era in Underwater Welding Techniques, **Marine Engineers Review: Journal of the Institute of Marine Engineers (India)**, 15, 3, 28-33
9. Vedachalam N., Ramadass G.A., 2021, Technologies for next generation scientific autonomous underwater vehicles, **Marine Engineers Review: Journal of the Institute of Marine Engineers (India)**
10. Venkatesan R., Jossia Joseph K., 2021, Rapid mode transmission in moored data buoys during cyclones, **Breeze- IMS Chennai Chapter Newsletter**, 21, 1

PACER

(NCPOR)

1. Abirami B., Kaari M., Venugopal G., Manikkam R., Joseph J., Bhaskar P.V., 2021, Anti-Freeze proteins (Afp): Properties, sources and applications- A review, **International Journal of Biological Macromolecules**, 189, DOI:10.1016/j.ijbiomac.2021.08.105, 292-305
2. Acharya A., Chatterjee S., Subeesh M.P., Radhakrishnan A., Murukesh N., 2021, Observation of Cloud Base Height and Precipitation Characteristics at a Polar Site Ny-Ålesund, Svalbard using Ground-Based Remote Sensing and Model Reanalysis, **Remote Sensing,** 13, 14, DOI:10.3390/rs13142808
3. Anilkumar N., Jena B., George J.V., Sabu P., Kshitija K., Ravichandran M., 2021, Recent freshening, warming and contraction of the Antarctic bottom water in the Indian sector of the Southern Ocean, **Frontiers in Marine Science**, DOI:10.3389/fmars.2021.730630
4. Bajish C.C., Jena B., Anilkumar N., 2021, Is the Indian monsoon rainfall linked to the Southern Ocean sea ice conditions?, **Weather and Climate Extremes**, 34: 100377, DOI:10.1016/j.wace.2021.100377

5. Balakrishnan S., Dev S.A., Sakthi A.R., Vikashini B., Reshma B.T., Magesh N.S., Ramasamy Y., 2021, Gene-ecological zonation and population genetic structure of *Tectona grandis* L.f. in India revealed by genome-wide SSR markers, **Tree Genetics & Genomes**, 17: 33, DOI:10.1007/s11295-021-01514-x
6. Behera P., Tiwari M., Knies J., 2021, Enhanced Arctic Stratification in a Warming Scenario: Evidence from the Mid Pliocene Warm Period, **Paleoceanography and Paleoclimatology,** 36, 6, DOI:10.1029/2020PA004182
7. Bhaskar P.V., Bhaskar J.T., Jawak S., Jyothibabu R., Mishra N., 2021, Mixotrophic plankton and Synechococcus distribution in waters around Svalbard, Norway during June 2019, **Polar Science,** DOI:10.1016/j.polar.2021.100697
8. Botsa S.M., Tara D.L.L.M., Magesh N.S., Tiwari A.K., 2021, Characterization of black carbon aerosols over an Indian Antarctic Station, Maitri and identification of potential source areas, **Environmental Science: Atmospheres**, DOI: 10.1039/d1ea00024a
9. Chatterjee M., Shankar D., Vijith V., Sen G.K., Sundar D., Michael G.S., Amol P., Chatterjee A., Sanyal P., Chatterjee S., Basu A., Chakraborti S., Mishra S.K., Suprit K., Mukherjee D., Mukherjee A., Mukhopadhyay S., Mondal G., Kalla A., Das M., 2021, Variation of salinity in the Sundarbans Estuarine System during the Equinoctial Spring tidal phase of March 2011, **Journal of Earth System Science,** DOI:10.1007/s12040-021-01636-9
10. Chatterjee S., Raj R.P., Bertino L., Mernild S.H., Subeesh M.P., Nuncio M., Ravichandran M., 2021, Combined influence of oceanic and atmospheric circulations on Greenland Sea Ice concentration, **Cryosphere,** 15, DOI:10.5194/tc-15-1307-202, 1307-1319
11. Chatterjee S., Ravichandran M., Murukesh N**.,** Raj R.P., Johannessen O.M., 2021, A possible relation between Arctic sea ice and late season Indian Summer Monsoon Rainfall extremes, ***Npj* Climate and Atmospheric Science,** 4, 36, DOI:10.1038/s41612-021-00191-w
12. Divya D.T., Subeesh M.P, Anju V.S, Anilkumar N., 2021, Variability in the hydrography of two proximate Arctic fjords during 2013–18, **Polar Science**, DOI:10.1016/j.polar.2021.100735
13. Fernandes S., Kerkar S., D'Costa A., Costa M., Mishra A., Shyama, S.K., Das K.R., 2021, Immuno-stimulatory effect and toxicology studies of salt pan bacteria as probiotics to combat shrimp diseases in aquaculture, **Fish & Shellfish Immunology**, 113, DOI:10.1016/j.fsi.2021.03.017, 69-78
14. George J.V., Vinayachandran P.N., Nayak A.A., 2021, Enhanced Double-Diffusive Salt Flux from the High-Salinity Core of Arabian Sea Origin Waters to the Bay of Bengal, **Journal of Physical Oceanography,** 51, 2, 505-518
15. Giri R.K., Rao N.V.C., Rahaman W., Kumar A., Satyanarayanan M., Krishna A.K., 2021, Paleoproterozoic calc-alkaline lamprophyres from the Sidhi Gneissic complex, India: Implications for plate tectonic evolution of the Central Indian Tectonic Zone, **Precambrian Research**, 362, 106316, DOI:10.1016/j.precamres.2021.106316
16. Gopal V., Krishnamurthy R.R., Sreeshma T., Chakraborty P., Sabari Nathan C., Kalaivanan R., Anshu R., Magesh N.S., Jayaprakash M., 2021, Effect of a tropical cyclone on the distribution of heavy metals in the marine sediments off Kameswaram, Southeast coast of India, **Marine Pollution Bulletin,** 171, 112741, DOI:10.1016/j.marpolbul.2021.112741
17. Islam M.A., Lubbad R., Amiri S.A.G., Isaev V., Shevchuk Y., Uvarova A.V., Afzal M.S., Avinash K., 2021, Modelling the seasonal variations of soil temperatures in the Arctic coasts, **Polar Science**, DOI:10.1016/J.POLAR.2021.100732
18. Jain A., Balmonte J.P., Singh R., Bhaskar P.V., Krishnan K.P., 2021, Spatially resolved assembly, connectivity, and structure of particle-associated and free-living bacterial communities in a high Arctic fjord, **FEMS Microbiology Ecology,** DOI:10.1093/femsec/fiab139
19. Jain A., Krishnan K.P., 2021, Marine Group-II archaea dominate particle-attached as well as free-living archaeal assemblages in the surface waters of Kongsfjorden, Svalbard, Arctic Ocean, **Antonie van Leeuwenhoek,** 114, DOI:10.1007/s10482-021-01547-1, 633–647

20. Jain V., Shankar D., Vinayachandran P.N., Mukherjee A., Amol P., 2021, Role of ocean dynamics in the evolution of mixed-layer temperature in the Bay of Bengal during the summer monsoon, **Ocean Modelling,** DOI:10.1016/j.ocemod.2021.101895
21. Jawak S.D., Andersen B.N., Pohjola V.A., Godoy, O., Hübner C., Jennings I., Ignatiuk D., Holmé K., Sivertsen A., Hann R., Tommervik H., Kääb A., Błaszczyk M., Salzano R., Luks B., Høgda K.A., Storvold R., Nilsen L., Salvatori R., Krishnan K.P., Chatterjee S., Lorentzen D.A., Erlandsson R., Rune Lauknes T., Malnes E., Karlsen S.R., Enomoto H., Fjæraa A.M., Zhang J., Marty S., Nygård K.O., Lihavainen H., 2021, SIOS's Earth Observation (EO), Remote Sensing (RS), and Operational Activities in Response to COVID-19, **Remote Sensing**, 13: 712, DOI:10.3390/rs13040712
22. Kalangutkar N., Kurian J.P., Iyar S.D., 2021, Characterization of ferromanganese crusts from the Central and South West Indian ridges: Evidence for hydrothermal activity, **Marine Georesources & Geotechnology,** DOI:10.1080/1064119X.2021.1886205
23. Kangane J., Nayak G.N., Tiwari A.K., Saalim S.M., 2021, Changing the paleo-depositional environment in the last 2300 years: a study through sedimentology and geochemistry of a sediment core, western Bay of Bengal, **Environmental Earth Sciences,** 80: 4, DOI:10.1007/s12665-020-09321-8
24. Kerkar A.U., Venkataramana V., Tripathy S.C., 2021, Assessing the Trophic Link between Primary and Secondary Producers in the Southern Ocean: A Carbon-Biomass based Approach, **Polar Science,** DOI:10.1016/j.polar.2021.100734
25. Kerkar A.U., Tripathy S.C., Hughes D.J., Sabu P., Sarkar A., Pandi S., Tiwari M., 2021, Characterization of Phytoplankton Productivity and Bio-Optical Variability in a Polar Marine Ecosystem, **Progress in Oceanography,** 195: 102573, DOI:10.1016/j.pocean.2021.102573
26. Kumar A., Kumar Naresh, Mukhopadhyay Sagarika, Simon L., 2021, Tomographic image of shear wave structure of NE India based on analysis of surface wave data, **Frontiers in Earth Science** DOI:10.3389/feart.2021.680361
27. Kumar Avinash, Yadav J., Mohan R., 2021, Seasonal sea-ice variability and its trend in the Weddell Sea sector of West Antarctica, **Environmental Research Letters,** 16: 024046, 2, DOI:10.1088/1748-9326/abdc88
28. Kumar V., Tiwari M., Prakash P., Mohan R., Thamban M., 2021, SST Changes in the Indian Sector of the Southern Ocean and their teleconnection with the Indian Monsoon during the Last Glacial Period. **Paleoceanography and Paleoclimatology,** 36, 8, DOI:10.1029/2020PA004139
29. Lathika N., Rahaman W., Tarique M., Gandhi N., Avinash K., Thamban M., 2021, Deep water circulation in the Arabian Sea during the last glacial cycle: Implications for paleo-redox condition, carbon sink and atmospheric CO2 variability, **Quaternary Science Reviews,** 257: 106853, DOI: 10.1016/j.quascirev.2021.106853
30. Luis A.J., Lotlikar V., 2021, Hydrographic characteristics along two XCTD sections between Africa and Antarctica during austral summer 2018 **Polar Science,** DOI:10.1016/j.polar.2021.100705
31. Magesh N.S., Tiwari A.K., Botsa S.M., Leitao T.D.L., 2021, Hazardous heavy metals in the pristine lacustrine systems of Antarctica: Insights from PMF model and ERA techniques, **Journal of Hazardous Materials,** 412: 125263, DOI:10.1016/j.jhazmat.2021.125263
32. Mahesh B.S., Nair A., Ghadi P., Warrier A.K., Mohan R., 2021, Holocene sedimentology in an isolation basin in the Larsemann Hills, East Antarctica, **Polar Science,** DOI:10.1016/j.polar.2021.100729
33. Mathew J., Singh A., Gopinath A., 2021, Nutrient concentrations and distribution of phytoplankton pigments in recently deposited sediments of a positive tropical estuary, **Marine Pollution Bulletin**, 168: 112454, DOI:10.1016/j.marpolbul.2021.112454

34. Mohamed Hatha A.A., Jabir T.**,** Prakash E.A., Krishnan K.P., 2021, Microcosm studies on the survival of Escherichia coli in the Kongsfjorden, an Arctic fjord, **Polar Science,** DOI:10.1016/j.polar.2021.100722
35. Nagar S., Antony R., Thamban M., 2021, Extracellular polymeric substances in Antarctic environments: A review of their ecological roles and impact on glacier biogeochemical cycles, **Polar Science,** DOI:10.1016/j.polar.2021.100686
36. Naik R.K., Chakraborty P., D'Costa P.M., Anilkumar N., Mishra R.K., Fernandes V., 2021, A simple technique to mitigate microplastic pollution and its mobility (via ballast water) in the global ocean, **Environmental Pollution,** 283: 117070, DOI:10.1016/j.envpol.2021.117070
37. Nasnodkar M.R., Nayak G.N., Bhangle P.P., Tiwari A.K., 2021, Spring-neap tides influence on bioavailability of metals and bioaccumulation in edible biota of the Zuari (tropical) Estuary, **Environmental Monitoring and Assessment**, 193: 167, DOI:10.1007/s10661-021-08970-x
38. Nigam R., Pandya K., Luis A.J., Sengupta R., Kotha M., 2021, Positive effects of COVID-19 lockdown on air quality of industrial cities (Ankleshwar and Vapi) of Western India, **Scientific Reports**, 11: 4285, DOI:10.1038/s41598-021-83393-9
39. Noronha-DMello C.A., Nair A., Mahesh B.S., Warrier A.K., Mohan R., Kurian S., 2021, Glacial-Holocene climate-driven shifts in lacustrine and terrestrial environments: Rock magnetic and geochemical evidence from an East Antarctic Mochou Lake, **Palaeogeography, Palaeoclimatology, Palaeoecology**, 576: 110505, DOI:10.1016/j.palaeo.2021.110505
40. Pandey A., Chalapathi Rao N.V., Rahaman W., Seth V., Sahoo S., 2021, Paleoproterozoic metaluminous syenites synchronous with the c. 2.21 Ga mafic dyke swarms from the Eastern Dharwar Craton, India: implications for alkaline magmatism associated with the breakup of supercraton Superia, **Journal of the Geological Society,** 513, DOI:10.1144/SP513-2020-92
41. Parez L.F., et al. (The IODP Expedition 382 Scientists), 2021, Miocene to present oceanographic variability in the Scotia Sea and Antarctic ice sheets dynamics: Insight from revised seismic-stratigraphy following IODP expedition 382, **Earth and Planetary Science Letters**, 553: 116657, DOI:10.1016/J.EPSL.2020.116657
42. Patel A., Goswami A., Dharpure J.K., Thamban M., Sharma P., Kulkarni A.V., Oulkar S., 2021, Estimation of mass and energy balance of glaciers using a distributed energy balance model over the Chandra River basin (Western Himalaya), **Hydrological Processes**, 35: e14058, 2, DOI:10.1002/hyp.14058
43. Patel L.K., Sharma A., Sharma P., Singh A., Thamban M., 2021, Glacier area changes and its relation to climatological trends over Western Himalaya between 1971 and 2018, **Journal of Earth System Science,** DOI:10.1007/s12040-021-01720-0
44. Patel L.K., Sharma P., Singh A.T., Pratap B., Oulkar S., Thamban M., 2021, Spatial surface velocity pattern in the glaciers of Chandra Basin, western Himalaya, **GeoCarto International Journal,** DOI:10.1080/10106049.2021.1920627
45. Patil S., Mohan R., Shetye S.S., Vaz V., Gazi S., Choudhari P.P., Jafar S.A., 2021, Emiliania huxleyi biometry and calcification response to Indian sector of the Southern Ocean environmental gradients, **Palaeogeography, Palaeoclimatology, Palaeoecology,** DOI:10.1016/j.palaeo.2021.110725
46. Prajith A., Tyagi A., Kurian P.J., 2021, Geochemistry of core sediments from the southeastern Bay of Bengal: inferences on weathering and early diagenetic changes, **Geoscience Frontiers**, 12, 2, DOI:10.1016/j.gsf.2020.08.011, 495-504 .
47. Prasanth R., Vijith V., Thushara V., George J.V., Vinayachandran P.N., 2021, Processes governing the seasonality of vertical chlorophyll-a distribution in the central Arabian Sea: Bio-Argo observations and ecosystem model simulation, **Deep Sea Research Part II: Topical Studies in Oceanography**, 183: 104926, DOI:10.1016/j.dsr2.2021.104926

48. Pratap B., Dey R., Matsuoka K., Moholdt G., Lindbäck K., Goel V., Laluraj C.M., Thamban M., 2021, Three-decade spatial patterns in surface mass balance of the Nivlisen Ice Shelf, central Dronning Maud Land, East Antarctica, **Journal of Glaciology**, DOI:10.1017/jog.2021.93, 1–13
49. Praveen Kumar B., D'Asaro E., Sureshkumar N., Pattabhi Rama Rao E., Ravichandran M., 2021, Thorpe turbulence scaling in night time convective surface layers in the North Indian Ocean, **Journal of Physical Oceanography**, DOI:10.1175/JPO-D-21-0017.1
50. Rathore M., Sinha R.K., Venkatachalam S., Krishnan K.P., 2021, Microbial diversity and associated metabolic potential in the supraglacial habitat of a fast-retreating glacier: A case study of Patsio glacier, North-western Himalaya, **Environmental Microbiology Reports,** DOI:10.1111/1758-2229.13017
51. Ravindran S., Pant V., Mitra A.K., Kumar Avinash, 2021, Spatio-temporal variability of sea-ice and ocean parameters over the Arctic Ocean in response to a warming climate, **Polar Science**, DOI:10.1016/j.polar.2021.100721
52. Ray D., Sreenivas B., Surya Prakash L., Mazumdar A., Peketi A. Paropkari A., Balu G., 2021, Fe and S-isotope compositions of hydrothermal deposits from Kings Triple Junction, Lau Basin, southwest Pacific Ocean, **Marine Chemistry,** 230: 103929, DOI:10.1016/j.marchem.2021.103929
53. Ray Y., Sen S., Sen K., Beg M.J., 2021, Quantifying the past glacial movements in Schirmacher Oasis, East Antarctica, **Polar Science,** DOI:10.1016/j.polar.2021.100733
54. Reilly B.T., Tauxe L., Brachfeld S., Raymo M., Bailey I., Hemming S., Weber M.E., Williams T., Garcia M., Guitard M., Martos Y. M., Pérez L.F., Zheng X., Armbrecht L., Cardillo F.G., Du Z., Fauth G., Glueder A., Gutjahr M., Hernández-Almeid, I., Hoem F.S., Hwang J., Iizuka M., Kato Y., Kenlee B., O'Connell S., Peck V., Ronge T.A., Seki O., Tripathi S., Warnock J., 2021, New magnetostratigraphic insights from Iceberg Alley on the trends and rhythms of Antarctic glaciation during the Plio- Pleistocene, **Paleoceanography and Paleoclimatology**, DOI:10.1029/2020PA003994
55. Renjith V.R., Divya D.T., Eldho T.I., Bhagat J., 2021, Atmospheric plastics- a potential airborne fomite with an emerging climate signature, **Journal of Climate Change and Health**, DOI:10.1016/j.joclim.2021.100037
56. Sabu P., Subeesh M.P., Sivakrishnan K.K., **Anilkumar N**., 2021, Causes and impacts of anomalous warming in the Prydz Bay, East Antarctica during austral summer 2016-17, **Polar Science**, DOI:10.1016/j.polar.2021.100660.
57. Samal A.K., Srivastava R.K., Rahaman W., 2021, Sr-Nd isotope geochemistry and petrogenesis of ca. 2.26–2.25 Ga and ca. 2.08 Ga mafic dyke swarms from the Dharwar craton, India: Insights into their mantle sources and geodynamic implications, **Lithos,** 406–407: 106503 DOI:10.1016/j.lithos.2021.106503
58. Sarathchandraprasad T., Tiwari M., Behera P., **2021**, South Asian Summer Monsoon Precipitation Variability during Late Pliocene: Role of Indonesian Throughflow, **Palaeogeography, Palaeoclimatology, Palaeoecology,** 574: 110447, DOI:10.1016/j.palaeo.2021.110447
59. Sarkar A., Mishra R.K. Bhaskar P.V., Anilkumar N., Sabu P., Soares M., 2021, Potential role of major phytoplankton communities on pCO2 modulation in the Indian Sector of Southern Ocean, **Thalassas: An International Journal of Marine Sciences**, DOI:10.1007/s41208-021-00323-2
60. Seetharam P., Balakrishna M., Botsa S.M., Satyanarayana G., Sailaj B.B.V., 2021, Potentiometric Studies of Bioactive Material Species of Ternary Complexes, **Russian Journal of General Chemistry,** 90, 12, 1-6
61. Shetye S., Kurian S., Vidya P.J., Gauns M., Shenoy D.M., Aparna S.G., Nandakumar K., Karapurkar S.G., 2021, Total organic carbon and its role in oxygen utilization in the eastern Arabian Sea, **Marine Pollution Bulletin**, 163: 111939, DOI:10.1016/j.marpolbul.2020.111939

62. Shetye S.S., Mohan R., Patil S., Kumar A., 2021, Diatom distribution in the Enderby Basin, East Antarctica, **Polar Science,** DOI:10.1016/j.polar.2021.100748
63. Singh A.T., Laluraj C.M., Sharma P., Redkar B.L., Patel L.K., Pratap B., Oulkar S., Thamban M., 2021, Hydrograph apportionment of the Chandra River draining from a semi-arid region of the Upper Indus Basin, western Himalaya, **Science of the Total Environment,** 780:146500, DOI:10.1016/j.scitotenv.2021.146500
64. Sinha R.K., Krishnan K.P., 2021, Genomic insights into the molecular mechanisms of a Pseudomonas strain significant in its survival in Kongsfjorden, an Arctic fjord, **Molecular Genetics and Genomics**, 296, 4DOI:10.1007/s00438-021-01788-9, 893-903
65. Siraswar R., Nayak G.N., D'Mello C.N., 2021, Metals bioavailability and toxicity in sediments of the main channel and subchannel of a tropical (Mandovi) estuary, Goa, India, **Arabian Journal of Geosciences**, 14, 11, 1-12
66. Soares M.A., Sabu P., Anilkumar N., Mishra R.K., Naik R.K., Bhaskar P.V., George J.V., Venkataramana V., Sarkar A., 2021, Variation of Particulate Organic Matter Characteristics in the upper water column of eddy-influenced waters at the Subtropical Front of the Indian sector of the Southern Ocean, **Journal of Sea Research**, 174: 102074, DOI:10.1016/j.seares.2021.102074
67. Srivastava R., Asutosh A., Sabu P., Anilkumar N., 2021, Investigation of Black Carbon characteristics over Southern Ocean: Contribution of fossil fuel and biomass burning, **Environmental Pollution,** 276: 116645, DOI:10.1016/j.envpol.2021.116645
68. Srivastava R., Ravichandran M., 2021, Spatial and seasonal variations of black carbon over the Arctic in a regional climate model, Polar Studies - Window to the Changing Earth, **Polar Science**, DOI: 10.1016/j.polar.2021.100670
69. Starr A., Hall I.R., Barker S., Rackow T., Zhang X., Hemming S.R., Van der Lubbe H.J.L., Knorr G., Berke M.A., Bigg G.R., Cartagena-Sierra A., Jimenez-Espejo F.J., Gong X., Gruetzner J., Lathika N., LeVay L.J., Robinson R.S., Ziegler M., Party E.S., 2021, Antarctic icebergs reorganize ocean circulation during Pleistocene glacials, **Nature,** 589, 236-241
70. Steiner Z., Sarkar A., Liu X., Berelson W.M., Adkins J.F., Achterberg E.P., Sabu P., Prakash S., Vinaychandran P.N., Byrne R.H., Turchyn A.V., 2021, On calcium-to-alkalinity anomalies in the North Pacific, Red Sea, Indian Ocean and Southern Ocean, **Geochimica et Cosmochimica Acta,** 303, DOI:10.1016/j.gca.2021.03.027, 1-14
71. Sudarsanarao P., Chari N.V.H.K., Sarma N.S., Chiranjeevulu G., Kiran R., Murthy K.N., Venkatesh P., Lotliker A.A., Tripathy S.C., 2021, Characteristics of conservative and non-conservative CDOM of a tropical monsoonal estuary in relation to changing biogeochemistry, **Regional Studies in Marine Science,** 44: 101721**,** DOI:10.1016/j.rsma.2021.101721
72. Sudarsanarao P., Chari N.V.H.K., Sarma N.S., Lotliker A.A., Tripathy S.C., Bajish C.C., 2021, Spatiotemporal variability in the optical characteristics of dissolved organic matter in the coastal Bay of Bengal, **International Journal of Environmental Science and Technology,** DOI:10.1007/s13762-021-03605-7
73. Susanth S., Kurian J.P., Bijesh C.M., Twinkle D., Tyagi A., Rajan S., 2021, Controls on the evolution of submarine canyons in steep continental slopes: geomorphological insights from Palar Basin, southeastern margin of India, **Geo-Marine Letters,** 41, 14, DOI:10.1007/s00367-021-00685-9
74. Susanth S., Kurian J.P., Twinkle D., Bijesh C.M., Tyagi A., 2021, Potential submarine landslide zones off Chennai, Southeast Continental Margin of India, **Regional Studies in Marine Science,** 45: 101832, DOI:10.1016/j.rsma.2021.101832
75. Tarique M., Rahaman W., Fousiya A.A., Lathika N., Thamban M., Achyuthan H., Misra S., 2021, Surface pH record (1990-2013) of the Arabian Sea from boron isotopes of Lakshadweep corals - trend, variability and control, **Journal of Geophysical Research – Biogeosciences.** 126, 7, DOI:10.1029/2020JG006122

76. Thakur R.C., Arun B.S., Gogoi M.M., Thamban M., Thayyen R.J., Redkar B.L., Suresh Babu S., 2021, Multi-layer distribution of black carbon and inorganic ions in the snowpacks of western Himalayas and snow albedo forcing, **Atmospheric Environment,** DOI:10.1016/j.atmosenv.2021.118564
77. Thomas F.A., Mohan M., Krishnan K.P., 2021, Bacterial diversity and their metabolic profiles in the sedimentary environments of Ny-Ålesund, Arctic, **Antonie van Leeuwenhoek,** 114, DOI:10.1007/s10482-021-01604-9, 1339-1360
78. Tiwari M., Kumar V., Nagoji, S., Mohan R., 2021, A 145 kyr Record of Upstream Changes in Indian Monsoon Circulation and its Link to Southern High-Latitude Climate, **Polar Science**, DOI:10.1016/j.polar.2021.100739
79. Tomar K.S. Kumari S., Luis A.J., 2021, Seasonal Ice Flow Velocity variations of Polar Record Glacier, East Antarctica during 2016-2019 using Sentinel-1 data, **Geocarto International**, DOI:10.1080/10106049.2021.1892211
80. Tripathy S.C., Varunan T., Shanmugam P., Kerkar A.U., Bhaskar J.T., Kurian S., Parli B.V., Gauns M., 2021, Summer variability in bio-optical properties and phytoplankton pigment signatures in two adjacent high Arctic fjords, Svalbard, **International Journal of Environmental Science and Technology,** DOI:10.1007/s13762-021-03767-4
81. Unagar A., Hashmi A., Tiwari A.K., Jawak S.D., Desai B., Urba A., Qureshi A., 2021, Coast of Eastern Antarctica as the source of atmospheric mercury during austral summer, **Atmospheric Pollution Research**, 12, 12, DOI:10.1016/j.apr.2021.101226
82. Venkatachalam S., Kannan V.M., Saritha V.N., Loganathachetti D.S., Mohan M., Krishnan K.P., 2021, Bacterial diversity and community structure along the glacier foreland of Midtre Lovénbreen, Svalbard, Arctic, **Ecological Indicators**, 126: 107704, DOI:10.1016/j.ecolind.2021.107704
83. Venkataramana V., Mishra R.K., Sabu P., Anilkumar N., Amit S., Naik R.K., Soares M.A., Gawade L., 2021, Stratification governs the plankton community structure and tropic interaction in the Southwestern tropical Indian Ocean during boreal summer, **Regional Studies in Marine Science,** DOI:10.1016/j.rsma.2021.101987
84. Venkatramana V., Sarma V.V.S.S., Gawade L., Reddy A.M., 2021, Magnitude of river discharge determines the food habit and community composition of zooplankton in the Indian estuaries during monsoon **Estuarine, Coastal and Shelf Science,** DOI:10.1016/j.ecss.2021.107601
85. Vidya P.J., Balaji M., Mani Murali R., 2021, Cyclone Hudhud-eddy induced phytoplankton bloom in the northern Bay of Bengal using a coupled model, **Progress in Oceanography,** 197: 102631, DOI:10.1016/j.pocean.2021.102631
86. Vidya P.J., Ravichandran M., Murtugudde R., Subeesh M.P., Chatterjee S., Neetu S., Nuncio M., 2021, Increased cyclone destruction potential in the Southern Indian Ocean, **Environmental Research Letters**, 16: 014027
87. Vidyasakar A., Krishnakumar S., Suresh Kumar K., Neelavannan K., Anbalagan S., Kasilingam K., Srinivasalu S., Saravanan P., Kamaraj S., Magesh N.S., 2021, Microplastic contamination in edible sea salt from the largest salt-producing states of India, **Marine Pollution Bulletin,** 171: 112728, DOI:10.1016/j.marpolbul.2021.112728
88. Vinayachandran P.N.M., Masumoto Y., Roberts M., Hugget J., Halo I., Chatterjee A., Amol P., Gupta G.V.M., Singh A., Mukherjee A., Prakash S., Beckley L.E., Raes E.J., Hood R., 2021, Reviews and syntheses: Physical and biogeochemical processes associated with upwelling in the Indian Ocean, **Biogeosciences,** DOI:10.5194/bg-2020-486
89. Vincent S.G.T., Salahudeen J.H., Godson P.S., Abhijith S.R., Nath K.A., Krishnan K.A., Magesh N.S., Kumar S.K., Moses S.A., 2021, Environmental factors influencing methanogenic activity in two contrasting tropical lake sediments, **Journal of Environmental Biology,** 42, 211-219

90. Vipindas P.V., Jabir T., Rehitha T.V., Krishnan K.P., 2021, Distinct community composition and abundance of ammonia oxidizers in the high Arctic fjord sediments of Svalbard, **Journal of Soils and Sediments,** 21, DOI:10.1007/s11368-021-02905-2, 1890–1904
91. Vishnupriya S., Jabir T., Krishnan K.P., Mohamed Hatha A.A., 2021, Bacterial community structure and functional profiling of high Arctic fjord sediments, **World Journal of Microbiology & Biotechnology,** 37: 133, DOI:10.1007/s11274-021-03098-z
92. VishnuRadhan, R., Thresyamma D.D., Eldho T.I., Dhiman R., Bhavan S. G., 2021, On the emergence of a health-pollutant-climate nexus in the wake of a global pandemic, **Environmental Science and Pollution Research,** DOI:10.1007/s11356-021-16392-y
93. Warrier A.K., Mahesh B.S., Mohan R., Shankar R., 2021, A 43-KA mineral magnetic record of environmental variations from lacustrine sediments of Schirmacher Oasis, East Antarctica, **Catena,** 202: 105300, DOI:10.1016/j.catena.2021.105300
94. Warrier A.K., Mahesh B.S., Sebastian J.G., Mohan R., 2021 How strong was pedogenesis in Schirmacher Oasis during the late quaternary?, **Polar Science,** 100636, DOI:10.1016/j.polar.2021.100636

Other Publications

1. Abirami B., Manigundan K., Radhakrishnan M., Gopikrishnan V., Bhaskar P.V., Shanmugasundaram T., Dastager S.C., 2021, Diversity and Bioprospecting potentials of Antarctic (Polar) Microbes, Chapter 26 in: Dhanasekaran D., Paul D., Amaresan N., Sankarnarayanan A, Souche Y. (eds) **Microbiome-Host Interactions**, First Edition, DOI:10.1201/9781003037521-26, 49-365
2. Kumar Avinash, Yadav J., Srivastava R., Mohan R., 2021, Arctic Sea ice variability and trends in the last four decades: Role of Ocean-atmospheric forcing, Chapter 14, Khare N. (ed) **Understanding present and past Arctic environments,** Elsevier, DOI:10.1016/B978-0-12-822869-2.00010-4, 301-324
3. Luis A.J., Mahanta K.K., Jawak S.D., 2021, Spatiotemporal variability of snowmelt onset across Svalbard inferred from scatterometer data (2000-2017), Chapter in: Khare N. (ed) **Understanding Present and Past Arctic Environments: An Integrated Approach from Climate Change Perspectives**, DOI:10.1016/B978-0-12-822869-2.00009-8, 269-299**.**
4. Luis A.J., Roy N., 2021, Decadal Arctic Sea-Ice Variability and its Implication to Climate Change, Chapter 15 In: Khare N. (ed) **Climate Change in the Arctic: An Indian Perspective**, Taylor and Francis, ISBN: 036748269X, 9780367482695
5. Nagajothi V., Geetha Priya M., Sharma P., Krishnaveni D., 2021, Classification of Dry/Wet Snow Using Sentinel-2 High Spatial Resolution Optical Data, In: Satapathy S., Zhang Y.D., Bhateja V., Majhi R. (eds), **Intelligent Data Engineering and Analytics**, Advances in Intelligent Systems and Computing, vol 1177, Springer, Singapore. DOI:10.1007/978-981-15-5679-1_1
6. Pandey M., Ray Y., Arora A., Shukla U.K., 2021, Structural control on the landscape Evolution of Son Alluvial Fan System in Ganga foreland basin, In Pandey P.C., Sharma L.K. (eds), **Advances in Remote Sensing for Natural Resource Monitoring**, 1st ed., Wiley-Blackwell.
7. Pednekar S.M., 2021, Spatial and Temporal variability of physical parameter around Ny-Alesund region of Arctic, Chapter in: Khare N. (ed) **Understanding Present and Past Arctic Environments: An Integrated Approach from Climate Change Perspectives**, DOI: 10.1016/B978-0-12-822869-2.00021-9, 377-398
8. Roy R., Naik R.K., D'Costa P.M., Nagamani P.V., Choudhury S.B., 2021, Nutrient Cycling and Seasonal Dynamics of Primary Production in Nearshore Waters of East Coast of India, Chapter 11 in: Das S., Ghosh T. (eds) **Estuarine Biogeochemical Dynamics of the East Coast of India,** DOI:10.1007/978-3-030-68980-3_11, 165-181.
9. Sudarsanarao P., Chari N.V.H.K., Sarma N.S., Tripathy S.C., Chiranjeevulu G., Das S., 2021, A Review of Estuarine CDOM Dynamics of East Coast of India Influenced by Hydrographical

Forcing, Chapter 14 in: Das S., Ghosh T. (eds) **Estuarine Biogeochemical Dynamics of the East Coast of India,** Springer, DOI:10.1007/978-3-030-68980-3_14, 223-237

10. Tiwari A.K., Leitao T.D.L., 2021, Establishment of India's Third Research Station in Antarctica—A Review, In: Khare N. (eds) **Engineering and Communications in Antarctica**, Springer Transactions in Civil and Environmental Engineering, DOI:10.1007/978-981-15-5732-3_11, 177-188
11. Tiwari A.K., Leitao T.D.L., Khare N., 2021, Antarctic Environmental Studies over the last 35 Years of the Indian Antarctic Expedition, In: Khare N. (eds) **Engineering and Communications in Antarctica**, Springer Transactions in Civil and Environmental Engineering, DOI:10.1007/978-981-15-5732-3_7, 123-134
12. Warrier A.K., Mahesh B.S., Sebastien J.G., Sali A.S.Y., Mohan R., 2021, A Synthesis of Glacial-Interglacial Paleoenvironmental Records from Lake Sediments of Schirmacher Oasis, East Antarctica, In: Khare N. (ed.) **Assessing the Antarctic Environment from a Climate Change Perspective**, Earth and Environmental Sciences Library Series, Springer Nature, ISBN: 3030870774

SAGE

(NCESS)

1. Abdul Azeez K.K., Mohan K., Veeraswamy K., Rastogi B.K., Gupta A.K., Harinarayana T., 2021, Lithospheric resistivity structure of the 2001 Bhuj earthquake aftershock zone, **Geophysical Journal International**, 224, 3, 1980–2000
2. Arunbose S., Srinivas Y., Rajkumar S., Nair N.C., Kaliraj S., 2021, Remote sensing, GIS and AHP techniques based investigation of groundwater potential zones in the Karumeniyar river basin, Tamil Nadu, southern India, **Groundwater for Sustainable Development**, 14: 100586, DOI:10.1016/j.gsd.2021.100586
3. Bansal B.K., Mohan K., Ul Haq A., Verma M., Prajapati S.K., Bhat G.M., 2021, Delineation of the Causative Fault of Recent Earthquakes (April–May 2020) in Delhi from Seismological and Morphometric Analysis, **Journal of Geological Society of India**, 97, DOI:10.1007/s12594-021-1711-5, 451–456
4. Bansal B.K., Mohan K., Verma M., Sutar A.K., 2021, A holistic seismotectonic model of Delhi region, **Scientific Reports**, 11: 13818, DOI:10.1038/s41598-021-93291-9
5. Bansal B.K., Pandey A.P., Singh A.P., Suresh G., Singh R.K., Gautam J.L., 2021, National Seismological Network in India for Real-Time Earthquake Monitoring, **Seismological Research Letters**, 92, 4, 2255–2269
6. Baruah S., Sharma A., Dey C., Saikia S., Boruah G.K., Eluyemi A.A., Borthakur P., Molia N., Hazarika A.D., Sailo S., D'Amico S., Phukan M.K., Baruah S., Kayal J.R., 2021, Correlation between crustal anisotropy and seismogenic stress field beneath Shillong–Mikir Plateau and its

vicinity in North East India, **Geomatics, Natural Hazards and Risk**, 12, DOI:10.1080/19475705.2021.1947902, 2070-2086
7. Bharali B., Rakshit R., Dinpuia L., Saikia S., Baruah S., 2021, The 2020 Mw 5.5 Mizoram earthquake and associated swarm activity in the junction of the Surma Basin and Indo-Myanmar Subduction Region, **Natural Hazards**, 109, DOI:10.1007/s11069-021-04924-1, 2381–2398
8. Bora D.K., Borah K., Singh A.P., Mishra O.P., 2021, Distribution of b-values in Indo-Burma Ranges, northeast India: Implications to structural heterogeneities and style of faulting, **Geological Journal**, DOI:10.1002/gj.4294
9. Bora D.K., Mukherjee P., Singh A.P., Borah K., Biswas R., 2021, Source Parameters and Scaling Relations for Small to moderate Earthquakes in the Indo-Burma Ranges, Northeast India and its Seismotectonic Implications, **Geological Journal**, DOI:10.1002/gj.4280.
10. Bora D.K., Singh A.P., Borah K., Anand A., Biswas R., Mishra O.P., 2021, Crustal structure beneath Indo-Burma Ranges from teleseismic receiver function and its implications to dehydration of the subducting Indian Slab, **Pure and Applied Geophysics**, DOI:10.1007/s00024-021-02897-7
11. Das R., Krishnakuma, A., 2021, Implications of methane emissions in biogeochemical budgeting: A study from a tropical wetland system, Kerala, India, **Environmental Engineering Science**, DOI:10.1089/ees.2021.0121
12. Dey C., Baruah S., Choudhury B.K., Chetia T., Saikia S., Sharma A., Phukan M., 2021, Living with Earthquakes: Educating masses through earthquake awareness North East (NE) India perspective, **Annals of Geophysics**, 64, 3, DOI:10.4401/ag-8479
13. Febina A.M., Priya K.L., Srinivas R., Sreeraj M.K., 2021, Implications of geotechnical properties on the sediment resuspension and heavy metal partitioning in Ashtamudi estuary, India, **Marine Georesources and Geotechnology**, DOI:10.1080/1064119X.2021.1946627.
14. Gayathri J.A., Raj V.T., Sreelash K., Maya K., Vandana M., Padmalal D., 2021, Spatiotemporal variability in groundwater chemistry of a mountainous catchment with complex geologic and climate gradients in south west India, **Environmental Earth Sciences**, 80: 563, DOI:10.1007/s12665-021-09862-6
15. George B.G., Kumar S., Ray J.S., 2021, C-Sr isotope stratigraphy of carbonate formations of the late Neoproterozoic - Cambrian Marwar supergroup, western India, **Precambrian Research**, 364: 106378, DOI:10.1016/j.precamres.2021.106378
16. Jesuraja K., Selvam S., Murugan R., 2021, GIS-based assessment of groundwater quality index (DWQI and AWQI) in Tiruchendur coastal city, southern Tamil Nadu, India, **Environmental Earth Sciences**, 80: 243, DOI:10.1007/s12665-021-09542-5
17. Joshi K.B., Banerji U.S., Dubey C.P., Oliveira E.P., 2021, Heavy minerals in provenance studies: An overview, **Arabian Journal of Geosciences**, 14: 1330, DOI:10.1007/s12517-021-07687-y
18. Joshi K.B., Ray S., Ahmad T., Manavalan S., Aradhi K.K., 2021, Geochemistry of meta-sediments from Neoproterozoic Shimla and Chail Groups of Outer Lesser Himalaya: Implications for provenance, tectonic setting, and paleo-weathering conditions, **Geological Journal**, 56, 9, DOI:10.1002/gj.4183, 4451-4478
19. Krishnakumar A., Das R., 2021, Nature of substratum sediment grains and carbon accumulation studies of Ashtamudi Ramsar wetland, southwest of India in context of ecological health, **Journal of Aquatic Biology and Fisheries**, 9, 1&2, 117-123.
20. Krishnakumar A., Das R., Aditya S.K., Krishnan K.A., 2021, Enrichment of potential toxic elements and environmental health implications: A study of the tropical agricultural soils in southern Western Ghats, India, **Environmental Quality Management**, DOI:10.1002/tqem.21792

21. Kumar M.R., Krishnan K.A., 2021, Grazing behaviour of tropical calanoid copepods and its effect on phytoplankton community structure, **Environmental Monitoring and Assessment**, 193: 495, DOI:10.1007/s10661-021-09306-5
22. Lalitha M., Dharumarajan S., Kalaiselvi B., Shivanand K., Koyal A., Kaliraj S., Hegde R., 2021, Hydrochemical characterization and groundwater quality in Cauvery deltaic fluvial plains of Southern India, **Environmental Science and Pollution Research**, 28, 33, DOI:10.1007/s11356-021-13467-8, 44861-44876
23. Mathew M.M., Sreelash K., Mathew M., Arulbalaji P., Padmalal D., 2021, Spatiotemporal variability of rainfall and its effect on hydrological regime in a tropical monsoon-dominated domain of Western Ghats, India, **Journal of Hydrology: Regional Studies**, 36: 100861, DOI:10.1016/j.ejrh.2021.100861
24. Mittal H., Sharma B., Sandhu M., Kumar D., 2021, Spatial distribution of high-frequency spectral decay factor Kappa (κ) for Delhi, India, **Acta Geophysica**, DOI:10.1007/s11600-021-00674-7
25. Mittal H., Yang B.M., Tseng T. L., Wu Y.M., 2021, Importance of real-time PGV in terms of lead-time and shakemaps: Results using 2018 ML 6.2 & 2019 ML 6.3 Hualien, Taiwan earthquakes, **Journal of Asian Earth Sciences**, 220: 104936, DOI:10.1016/j.jseaes.2021.104936
26. Mohan K., Dugar S., Pancholi V., Dwivedi V., Chopra S., Sairam B., 2021, Micro-seismic hazard assessment of Ahmedabad city, Gujarat (Western India) through near-surface characterization/soil modelling, **Bulletin of Earthquake Engineering**, 19, DOI:10.1007/s10518-020-01020-w, 623–656
27. Mohan U., Krishnakuma, A., 2021, Assessment of water quality of Kallada river, southern Western ghats, India: A statistical approach, **Journal of Geosciences Research**, 6, 2, 220-230.
28. Mukundan V., Thampi S.V., Bhardwaj A., Fang X., 2021, Impact of the 2018 Mars global dust storm on the ionospheric peak: A study using a photochemical model, **Journal of Geophysical Research: Planets**, 126: e2021JE006823, 4, DOI:10.1029/2021JE006823
29. Oehler T., Ramasamy M., George M.E., Babu D.S.S., Dähnke K., Ankele M., Böttcher M. E., Santos I.R., Moosdorf N., 2021, Tropical beaches attenuate groundwater nitrogen pollution flowing to the ocean, **Environmental Science and Technology**, 55, 12, DOI:10.1021/acs.est.1c00759, 8432-8438
30. Peketi A., Mazumdar A., Pillutla S.P.K., Sawant B., Gupta H., 2021, Climatic and tectonic control on the Bengal Fan sedimentation since the Pliocene, **Geochemistry, Geophysics, Geosystems**, 22: e2020GC009448, 3, DOI:10.1029/2020GC009448
31. Prajapati S.K., Mishra O.P., 2021, Co-seismic deformation and slip distribution of 5 April 2017 Mashhad, Iran earthquake using InSAR sentinel-1A image: implication to source characterization and future seismogenesis, **Natural Hazard**, 105, DOI: 10.1007/s11069-020-04440-8, 3039–3057
32. Riyas A., Dahanukar N., Krishnan K.A., Kumar A.B., 2021, Scyphozoan jellyfish blooms and their relationship with environmental factors along the south-eastern Arabian Sea, **Marine Biology Research**, 17, 2, DOI:10.1080/17451000.2021.1916034, 185-199
33. Roy A., Dubey C.P., Prasad M., 2021, Gravity inversion for heterogeneous sedimentary basin with b-spline polynomial approximation using differential evolution algorithm, **Geophysics**, 86, 3, DOI:10.1190/geo2019-0779.1, F35-F47
34. Roy A., Dubey C.P., Prasad M., 2021, Gravity inversion of basement relief using Particle Swarm Optimization by automated parameter selection of Fourier coefficients, **Computer and Geosciences**, 156: 104875, DOI:10.1016/j.cageo.2021.104875
35. Roy A., Kumar T.S., 2021, Gravity inversion of 2D fault having variable density contrast using particle swarm optimization, **Geophysical Prospecting**, 69, 6, DOI:10.1111/1365-2478.13094, 1358-1374

36. Sandhya S., Elezabeth V.A., Harsha M., Krishnan K.A., 2021, Crosslinked chitosan-montmorillonite biocomposite with Fe intercalation: Enhancing surface chemistry for improved phosphate adsorption, **Surfaces and Interfaces**, 27: 101468, DOI:10.1016/j.surfin.2021.101468
37. Saranya P., Krishnakumar A., Sinha N., Kumar S., Krishnan K.A., 2021, Isotopic signatures of moisture recycling and evaporation processes along the Western Ghats orography, **Atmospheric Research**, 264: 105863, DOI:10.1016/j.atmosres.2021.105863.
38. Seela B.K., Janapati J., Unnikrishnan C.K., Lin P.L., Loh J.L., Chang W.Y., Kumar U., Reddy K. K., Lee D.I., Reddy M.V., 2021, Raindrop size distributions of north Indian Ocean tropical cyclones observed at the coastal and inland stations in South India, **Remote Sensing**, 13: 3178, 16, DOI:10.3390/rs13163178
39. Shankar U., Kumari S., Yadav P.K., Singh A.P., Gupta A.K., 2021, Microtremor measurements in the India's holy city, Varanasi for assessment of site characteristics, **Quaternary International**, 585, 143-151
40. Shankar U., Yadav P.K., Singh A.P., Gupta A.K., 2021, Evaluation of site-specific characteristics using microtremor measurements in the Gorakhpur city of Uttar Pradesh, India, **Journal of Earth System Science**, 130, 4, 1-11
41. Shankar Uma, Ojha M., Ghosh R., 2021, Assessment of gas hydrate reservoir from inverted seismic impedance and porosity in the northern Hikurangi margin, New Zealand, **Marine and Petroleum Geology**, 123: 10475, DOI:10.1016/j.marpetgeo.2020.104751.
42. Singh K.D., Mohan K., Chopra S., 2021, Magnetotelluric investigation in the swarm prone intraplate Talala region of Saurashtra, Gujarat, western India, **Journal of Applied Geophysics**, 192: 104381, DOI:10.1016/j.jappgeo.2021.104381
43. Singh R.., Singh A.P., Khan P.K., Pandey A.P., 2021, Investigation of shallow structures using ambient seismic noise data recorded at permanent broadband seismic stations in the Eastern Indian Shield and adjoining regions, **Environmental Earth Sciences**, 80, 4, 1-24.
44. Sribin C., Rao B.P., Kumar M.R., Tomson J.K., 2021, Mantle deformation beneath the Western Ghats, India: Insights from core-refracted shear wave splitting analysis, **Journal of Asian Earth Sciences**, 218: 104848, DOI:10.1016/j.jseaes.2021.104848
45. Sumesh R.K., Resmi E.A., Unnikrishnan C.K., Jash D., Ramachandran K.K., 2021, Signatures of shallow and deep clouds inferred from precipitation microphysics over windward side of Western Ghats, **Journal of Geophysical Research: Atmospheres**, 126: e2020JD034312, 10, DOI:10.1029/2020JD034312
46. Sutar A.K., Roy S., Tiwari V.M., 2021, Revisiting the Koyna-Warna seismic zone: strain budget, present-day potential and associated hazard, **Journal of Seismology**, 25, DOI:10.1007/s10950-021-10024-1, 1265-1279
47. Tiwari A.K., Singh C., Sandvol E., Mukhopadhyay S., Singh Arun, Gupta A.K., 2021, Sn attenuation tomography of southeastern Tibet: new constraints on lithospheric mantle deformation, **Geophysical Journal International**, 228, DOI:10.1093/gji/ggab380, 1038–1053
48. Tripathy B.R., Liu X., Songer M., Kumar L., Kaliraj S., Chatterjee N.D., Wickramasinghe W.M.S., Mahanta K.K., 2021, Descriptive Spatial Analysis of Human-Elephant Conflict (HEC) Distribution and Mapping HEC Hotspots in Keonjhar Forest Division, India, **Frontiers in Ecology and Evolution**, 9: 640624, DOI:10.3389/fevo.2021.640624
49. Unnikrishnan C.K., Pawar S., Gopalakrishnan V., 2021, Satellite-observed lightning hotspots in India and lightning variability over tropical South India, **Advances in Space Research**, 68, DOI:10.1016/j.asr.2021.04.009, 1690-1705
50. Unnikrishnan P., Srinivas R., Ramasamy M., Babu D.S.S., 2021, Computation of submarine groundwater discharge from geomorphologically different coastal catchments of SW India using numerical modelling, **Regional Studies in Marine Science**, 47: 101963, DOI:10.1016/j.rsma.2021.101963

51. Wadhawan M., Rana N., Gahalaut V.K., Suresh G., Mishra O.P., Das A.K., 2021, Monsoonal rainfall induced earthquake Swarm in Amravati district of the Central India, **Journal of Earth System Science**, 130: 29, DOI:10.1007/s12040-020-01511-z
52. Yang B.M., Mittal H., Wu Y.M., 2021, Real-Time Production of PGA, PGV, Intensity, and Shakemaps using dense MEMS-based sensors in Taiwan, **Sensors**, 21, 3, DOI:10.3390/s21030943, 1-14

Other Publications

1. Mishra O.P., Khare N., Das S.B., Kumar Vikas, Singh Jagvir, Vandana, Singh Priya, Ghatak M., Shekhar S., Tiwari Anurag, Gera S.K., Mahto R., Gusain P., 2021, Glacial mass change induced earthquakes in the Himalayan region of South Asia and its bearing to understand Arctic glaciers dynamics: proxy of climate change, 2021, Chapter 20 in Khare N. (eds), **Understanding Present and Past Arctic Environments**, DOI:10.1016/B978-0-12-822869-2.00025-6, 433-455
2. Mishra O.P., Singh Priya, Khare N., 2021, Recent Advances in Seismo-Geophysical Studies for the Arctic Region under Climate Change Scenario, Chapter 14 in Khare N. (eds), **Climate Change in the Arctic: An Indian Perspective**, Taylor & Francis, CR Press, ISBN 9780367482695

****