

Sarah Dance

List of Publications by Year in descending order

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63
papers

2,029
citations

279798

23
h-index

265206

42
g-index

78
all docs

78
docs citations

78
times ranked

2078
citing authors

#	ARTICLE	IF	CITATIONS
1	On the representation error in data assimilation. Quarterly Journal of the Royal Meteorological Society, 2018, 144, 1257-1278.	2.7	202
2	Estimating surface CO ₂ fluxes from space-borne CO ₂ dry air mole fraction observations using an ensemble Kalman Filter. Atmospheric Chemistry and Physics, 2009, 9, 2619-2633.	4.9	148
3	Unbiased ensemble square root filters. Physica D: Nonlinear Phenomena, 2008, 237, 1021-1028.	2.8	101
4	Scheduling satellite-based SAR acquisition for sequential assimilation of water level observations into flood modelling. Journal of Hydrology, 2013, 495, 252-266.	5.4	97
5	Incorporation of lubrication effects into the force-coupling method for particulate two-phase flow. Journal of Computational Physics, 2003, 189, 212-238.	3.8	94
6	Satellite-supported flood forecasting in river networks: A real case study. Journal of Hydrology, 2015, 523, 706-724.	5.4	88
7	Correlated observation errors in data assimilation. International Journal for Numerical Methods in Fluids, 2008, 56, 1521-1527.	1.6	79
8	Theoretical insight into diagnosing observation error correlations using observation-minus-background and observation-minus-analysis statistics. Quarterly Journal of the Royal Meteorological Society, 2016, 142, 418-431.	2.7	72
9	Data assimilation with correlated observation errors: experiments with a 1-D shallow water model. Tellus, Series A: Dynamic Meteorology and Oceanography, 2022, 65, 19546.	1.7	71
10	Remote sensing of intertidal morphological change in Morecambe Bay, U.K., between 1991 and 2007. Estuarine, Coastal and Shelf Science, 2010, 87, 487-496.	2.1	69
11	Estimating interchannel observation error correlations for IASI radiance data in the Met Office system. Quarterly Journal of the Royal Meteorological Society, 2014, 140, 1236-1244.	2.7	63
12	Diagnosing Observation Error Correlations for Doppler Radar Radial Winds in the Met Office UKV Model Using Observation-Minus-Background and Observation-Minus-Analysis Statistics. Monthly Weather Review, 2016, 144, 3533-3551.	1.4	61
13	Diagnosing atmospheric motion vector observation errors for an operational high-resolution data assimilation system. Quarterly Journal of the Royal Meteorological Society, 2017, 143, 333-341.	2.7	51
14	Diagnosing Horizontal and Inter-Channel Observation Error Correlations for SEVIRI Observations Using Observation-Minus-Background and Observation-Minus-Analysis Statistics. Remote Sensing, 2016, 8, 581.	4.0	50
15	Representativity error for temperature and humidity using the Met Office high-resolution model. Quarterly Journal of the Royal Meteorological Society, 2014, 140, 1189-1197.	2.7	49
16	Data assimilation for state and parameter estimation: application to morphodynamic modelling. Quarterly Journal of the Royal Meteorological Society, 2013, 139, 314-327.	2.7	40
17	On the interaction of observation and prior error correlations in data assimilation. Quarterly Journal of the Royal Meteorological Society, 2018, 144, 48-62.	2.7	35
18	3D-Var Assimilation of Insect-Derived Doppler Radar Radial Winds in Convective Cases Using a High-Resolution Model. Monthly Weather Review, 2011, 139, 1148-1163.	1.4	33

#	ARTICLE	IF	CITATIONS
19	Collision barrier effects on the bulk flow in a random suspension. <i>Physics of Fluids</i> , 2004, 16, 828-831.	4.0	32
20	Floodwater detection in urban areas using Sentinel-1 and WorldDEM data. <i>Journal of Applied Remote Sensing</i> , 2021, 15, .	1.3	32
21	Estimating correlated observation error statistics using an ensemble transform Kalman filter. <i>Tellus, Series A: Dynamic Meteorology and Oceanography</i> , 2022, 66, 23294.	1.7	30
22	Issues in high resolution limited area data assimilation for quantitative precipitation forecasting. <i>Physica D: Nonlinear Phenomena</i> , 2004, 196, 1-27.	2.8	25
23	Deep learning for automated river-level monitoring through river-camera images: an approach based on water segmentation and transfer learning. <i>Hydrology and Earth System Sciences</i> , 2021, 25, 4435-4453.	4.9	25
24	Robust algorithm for detecting floodwater in urban areas using synthetic aperture radar images. <i>Journal of Applied Remote Sensing</i> , 2018, 12, 1.	1.3	25
25	Variational data assimilation for parameter estimation: application to a simple morphodynamic model. <i>Ocean Dynamics</i> , 2009, 59, 697-708.	2.2	23
26	A pragmatic strategy for implementing spatially correlated observation errors in an operational system: An application to Doppler radial winds. <i>Quarterly Journal of the Royal Meteorological Society</i> , 2019, 145, 2772-2790.	2.7	23
27	On diagnosing observation error statistics with local ensemble data assimilation. <i>Quarterly Journal of the Royal Meteorological Society</i> , 2017, 143, 2677-2686.	2.7	22
28	Collecting and utilising crowdsourced data for numerical weather prediction: Propositions from the meeting held in Copenhagen, 4-5 December 2018. <i>Atmospheric Science Letters</i> , 2019, 20, e921.	1.9	22
29	Ensemble-based data assimilation and the localisation problem. <i>Weather</i> , 2010, 65, 65-69.	0.7	21
30	Observation operators for assimilation of satellite observations in fluvial inundation forecasting. <i>Hydrology and Earth System Sciences</i> , 2019, 23, 2541-2559.	4.9	21
31	Improvements in Forecasting Intense Rainfall: Results from the FRANC (Forecasting Rainfall Exploiting) Tj ETQq1 1 0.784314 rgBT /Over 10, 125.	2.3	21
32	Investigating the role of prior and observation error correlations in improving a model forecast of forest carbon balance using Four-dimensional Variational data assimilation. <i>Agricultural and Forest Meteorology</i> , 2016, 228-229, 299-314.	4.8	20
33	Observation impact, domain length and parameter estimation in data assimilation for flood forecasting. <i>Environmental Modelling and Software</i> , 2018, 104, 199-214.	4.5	20
34	The accuracy of Doppler radar wind retrievals using insects as targets. <i>Meteorological Applications</i> , 2010, 17, 419-432.	2.1	19
35	A hybrid data assimilation scheme for model parameter estimation: Application to morphodynamic modelling. <i>Computers and Fluids</i> , 2011, 46, 436-441.	2.5	18
36	The conditioning of least-squares problems in variational data assimilation. <i>Numerical Linear Algebra With Applications</i> , 2018, 25, e2165.	1.6	18

#	ARTICLE	IF	CITATIONS
37	Improving Urban Flood Mapping by Merging Synthetic Aperture Radar-Derived Flood Footprints with Flood Hazard Maps. <i>Water (Switzerland)</i> , 2021, 13, 1577.	2.7	16
38	The potential of flood forecasting using a variable-resolution global Digital Terrain Model and flood extents from Synthetic Aperture Radar images. <i>Frontiers in Earth Science</i> , 2015, 3, .	1.8	15
39	Comparison of aircraft-derived observations with in situ research aircraft measurements. <i>Quarterly Journal of the Royal Meteorological Society</i> , 2016, 142, 2949-2967.	2.7	15
40	Evidence of a topographic signal in surface soil moisture derived from ENVISAT ASAR wide swath data. <i>International Journal of Applied Earth Observation and Geoinformation</i> , 2016, 45, 178-186.	2.8	14
41	Observation Error Statistics for Doppler Radar Radial Wind Superobservations Assimilated into the DWD COSMO-KENDA System. <i>Monthly Weather Review</i> , 2019, 147, 3351-3364.	1.4	14
42	Integration of a 3D variational data assimilation scheme with a coastal area morphodynamic model of Morecambe Bay. <i>Coastal Engineering</i> , 2012, 69, 82-96.	4.0	13
43	Improving the condition number of estimated covariance matrices. <i>Tellus, Series A: Dynamic Meteorology and Oceanography</i> , 2022, 72, 1696646.	1.7	13
44	Understanding the effect of disturbance from selective felling on the carbon dynamics of a managed woodland by combining observations with model predictions. <i>Journal of Geophysical Research G: Biogeosciences</i> , 2017, 122, 886-902.	3.0	12
45	Particle density stratification in transient sedimentation. <i>Physical Review E</i> , 2003, 68, 031403.	2.1	10
46	Technical note: Assessment of observation quality for data assimilation in flood models. <i>Hydrology and Earth System Sciences</i> , 2018, 22, 3983-3992.	4.9	10
47	Collection and extraction of water level information from a digital river camera image dataset. <i>Data in Brief</i> , 2020, 33, 106338.	1.0	8
48	The impact of using reconditioned correlated observation-error covariance matrices in the Met Office 1D-Var system. <i>Quarterly Journal of the Royal Meteorological Society</i> , 2020, 146, 1372-1390.	2.7	8
49	Evaluating the impact of post-processing medium-range ensemble streamflow forecasts from the European Flood Awareness System. <i>Hydrology and Earth System Sciences</i> , 2022, 26, 2939-2968.	4.9	8
50	Four-dimensional variational data assimilation for high resolution nested models. <i>Computers and Fluids</i> , 2011, 46, 137-141.	2.5	7
51	The Role of Digital Technologies in Responding to the Grand Challenges of the Natural Environment: The Windermere Accord. <i>Patterns</i> , 2021, 2, 100156.	5.9	6
52	State estimation using the particle filter with mode tracking. <i>Computers and Fluids</i> , 2011, 46, 392-397.	2.5	5
53	Accounting for observation uncertainty and bias due to unresolved scales with the Schmidt-Kalman filter. <i>Tellus, Series A: Dynamic Meteorology and Oceanography</i> , 2022, 72, 1831830.	1.7	5
54	Evaluating errors due to unresolved scales in convection-permitting numerical weather prediction. <i>Quarterly Journal of the Royal Meteorological Society</i> , 2021, 147, 2657-2669.	2.7	4

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55	Automated Water Segmentation and River Level Detection on Camera Images Using Transfer Learning. Lecture Notes in Computer Science, 2021, , 232-245.	1.3	4
56	Spatial scale evaluation of forecast flood inundation maps. Journal of Hydrology, 2022, 612, 128170.	5.4	4
57	Towards operational use of aircraft-derived observations: a case study at London Heathrow airport. Meteorological Applications, 2019, 26, 542-555.	2.1	3
58	New bounds on the condition number of the Hessian of the preconditioned variational data assimilation problem. Numerical Linear Algebra With Applications, 2022, 29, e2405.	1.6	3
59	Comparing diagnosed observation uncertainties with independent estimates: A case study using aircraft-based observations and a convection-permitting data assimilation system. Atmospheric Science Letters, 2021, 22, e101029.	1.9	2
60	Efficient computation of matrix-vector products with full observation weighting matrices in data assimilation. Quarterly Journal of the Royal Meteorological Society, 0, , .	2.7	2
61	Exploring the characteristics of a vehicle-based temperature dataset for kilometre-scale data assimilation. Meteorological Applications, 2022, 29, .	2.1	2
62	DATA ASSIMILATION FOR MORPHODYNAMIC PREDICTION AND PREDICTABILITY. , 2009, , .		1
63	Unbiased ensemble square root filters. Proceedings in Applied Mathematics and Mechanics, 2007, 7, 1026505-1026506.	0.2	0