

Robert M Banta

List of Publications by Year in descending order

Source: <https://exaly.com/author-pdf/2398956/publications.pdf>

Version: 2024-02-01

107
papers

7,688
citations

43973

48
h-index

53109

85
g-index

108
all docs

108
docs citations

108
times ranked

5246
citing authors

#	ARTICLE	IF	CITATIONS
1	Spatial and temporal variability of ozone along the Colorado Front Range occurring over 2 days with contrasting wind flow. <i>Elementa</i> , 2021, 9, .	1.1	2
2	Coupled Air Quality and Boundary-Layer Meteorology in Western U.S. Basins during Winter: Design and Rationale for a Comprehensive Study. <i>Bulletin of the American Meteorological Society</i> , 2021, 102, E2012-E2033.	1.7	14
3	Revisiting the Surface Energy Imbalance. <i>Journal of Geophysical Research D: Atmospheres</i> , 2021, 126, e2020JD034219.	1.2	4
4	Doppler-Lidar Evaluation of HRRR-Model Skill at Simulating Summertime Wind Regimes in the Columbia River Basin during WFIP2. <i>Weather and Forecasting</i> , 2021, , .	0.5	1
5	Characterizing NWP Model Errors Using Doppler-Lidar Measurements of Recurrent Regional Diurnal Flows: Marine-Air Intrusions into the Columbia River Basin. <i>Monthly Weather Review</i> , 2020, 148, 929-953.	0.5	11
6	Characterization of turbulence under different stability conditions using lidar scanning data. <i>Journal of Physics: Conference Series</i> , 2020, 1452, 012085.	0.3	1
7	Evaluating the WFIP2 updates to the HRRR model using scanning Doppler lidar measurements in the complex terrain of the Columbia River Basin. <i>Journal of Renewable and Sustainable Energy</i> , 2020, 12, .	0.8	8
8	Improving Wind Energy Forecasting through Numerical Weather Prediction Model Development. <i>Bulletin of the American Meteorological Society</i> , 2019, 100, 2201-2220.	1.7	87
9	Identification and Characterization of Persistent Cold Pool Events from Temperature and Wind Profilers in the Columbia River Basin. <i>Journal of Applied Meteorology and Climatology</i> , 2019, 58, 2533-2551.	0.6	23
10	Spatial Variability of Winds and HRRR's NCEP Model Error Statistics at Three Doppler-Lidar Sites in the Wind-Energy Generation Region of the Columbia River Basin. <i>Journal of Applied Meteorology and Climatology</i> , 2019, 58, 1633-1656.	0.6	25
11	The Second Wind Forecast Improvement Project (WFIP2): Observational Field Campaign. <i>Bulletin of the American Meteorological Society</i> , 2019, 100, 1701-1723.	1.7	55
12	A New Research Approach for Observing and Characterizing Land's Atmosphere Feedback. <i>Bulletin of the American Meteorological Society</i> , 2018, 99, 1639-1667.	1.7	75
13	Evaluating and Improving NWP Forecast Models for the Future: How the Needs of Offshore Wind Energy Can Point the Way. <i>Bulletin of the American Meteorological Society</i> , 2018, 99, 1155-1176.	1.7	19
14	Properties of the offshore low level jet and rotor layer wind shear as measured by scanning Doppler Lidar. <i>Wind Energy</i> , 2017, 20, 987-1002.	1.9	27
15	Assessment of NWP Forecast Models in Simulating Offshore Winds through the Lower Boundary Layer by Measurements from a Ship-Based Scanning Doppler Lidar. <i>Monthly Weather Review</i> , 2017, 145, 4277-4301.	0.5	20
16	Evaluation of turbulence measurement techniques from a single Doppler lidar. <i>Atmospheric Measurement Techniques</i> , 2017, 10, 3021-3039.	1.2	49
17	A new formulation for rotor equivalent wind speed for wind resource assessment and wind power forecasting. <i>Wind Energy</i> , 2016, 19, 1439-1452.	1.9	47
18	The POWER Experiment: Impact of Assimilation of a Network of Coastal Wind Profiling Radars on Simulating Offshore Winds in and above the Wind Turbine Layer. <i>Weather and Forecasting</i> , 2016, 31, 1071-1091.	0.5	14

#	ARTICLE	IF	CITATIONS
19	Doppler Lidar in the Wind Forecast Improvement Projects. EPJ Web of Conferences, 2016, 119, 10001.	0.1	0
20	Understanding high wintertime ozone pollution events in an oil- and natural gas-producing region of the western US. Atmospheric Chemistry and Physics, 2015, 15, 411-429.	1.9	154
21	3D Volumetric Analysis of Wind Turbine Wake Properties in the Atmosphere Using High-Resolution Doppler Lidar. Journal of Atmospheric and Oceanic Technology, 2015, 32, 904-914.	0.5	45
22	Quantifying Wind Turbine Wake Characteristics from Scanning Remote Sensor Data. Journal of Atmospheric and Oceanic Technology, 2014, 31, 765-787.	0.5	120
23	High winter ozone pollution from carbonyl photolysis in an oil and gas basin. Nature, 2014, 514, 351-354.	13.7	265
24	A new look at methane and nonmethane hydrocarbon emissions from oil and natural gas operations in the Colorado Denver-Julesburg Basin. Journal of Geophysical Research D: Atmospheres, 2014, 119, 6836-6852.	1.2	257
25	Lidar Investigation of Atmosphere Effect on a Wind Turbine Wake. Journal of Atmospheric and Oceanic Technology, 2013, 30, 2554-2570.	0.5	71
26	Methane emissions estimate from airborne measurements over a western United States natural gas field. Geophysical Research Letters, 2013, 40, 4393-4397.	1.5	414
27	Wind Energy Meteorology: Insight into Wind Properties in the Turbine-Rotor Layer of the Atmosphere from High-Resolution Doppler Lidar. Bulletin of the American Meteorological Society, 2013, 94, 883-902.	1.7	79
28	Observational Techniques: Sampling the Mountain Atmosphere. Springer Atmospheric Sciences, 2013, , 409-530.	0.4	13
29	Overview of the 2010 Carbonaceous Aerosols and Radiative Effects Study (CARES). Atmospheric Chemistry and Physics, 2012, 12, 7647-7687.	1.9	94
30	Turbulence Regimes and Turbulence Intermittency in the Stable Boundary Layer during CASES-99. Journals of the Atmospheric Sciences, 2012, 69, 338-351.	0.6	248
31	Doppler Lidar-Based Wind-Profile Measurement System for Offshore Wind-Energy and Other Marine Boundary Layer Applications. Journal of Applied Meteorology and Climatology, 2012, 51, 327-349.	0.6	96
32	Development and Application of a Compact, Tunable, Solid-State Airborne Ozone Lidar System for Boundary Layer Profiling. Journal of Atmospheric and Oceanic Technology, 2011, 28, 1258-1272.	0.5	64
33	Dependence of daily peak O3 concentrations near Houston, Texas on environmental factors: Wind speed, temperature, and boundary-layer depth. Atmospheric Environment, 2011, 45, 162-173.	1.9	60
34	Comparison between the TOPAZ Airborne Ozone Lidar and In Situ Measurements during TexAQS 2006. Journal of Atmospheric and Oceanic Technology, 2011, 28, 1243-1257.	0.5	17
35	Enhancing energy production by wind farms. SPIE Newsroom, 2011, , .	0.1	1
36	Evolution and structure of a cold front in an Alpine valley as revealed by a Doppler lidar. Quarterly Journal of the Royal Meteorological Society, 2010, 136, 962-977.	1.0	12

#	ARTICLE	IF	CITATIONS
37	Stable Boundary Layer Depth from High-Resolution Measurements of the Mean Wind Profile. <i>Journal of Applied Meteorology and Climatology</i> , 2010, 49, 20-35.	0.6	39
38	Relationships of coastal nocturnal boundary layer winds and turbulence to Houston ozone concentrations during TexAQS 2006. <i>Journal of Geophysical Research</i> , 2010, 115, .	3.3	39
39	Convective venting and surface ozone in Houston during TexAQS 2006. <i>Journal of Geophysical Research</i> , 2010, 115, .	3.3	23
40	Airborne lidar measurements of ozone flux downwind of Houston and Dallas. <i>Journal of Geophysical Research</i> , 2010, 115, .	3.3	24
41	Long-range transport of ozone from the Los Angeles Basin: A case study. <i>Geophysical Research Letters</i> , 2010, 37, .	1.5	70
42	Regional and local background ozone in Houston during Texas Air Quality Study 2006. <i>Journal of Geophysical Research</i> , 2009, 114, .	3.3	35
43	Doppler Lidar Estimation of Mixing Height Using Turbulence, Shear, and Aerosol Profiles. <i>Journal of Atmospheric and Oceanic Technology</i> , 2009, 26, 673-688.	0.5	166
44	Stable-boundary-layer regimes from the perspective of the low-level jet. <i>Acta Geophysica</i> , 2008, 56, 58-87.	1.0	97
45	Along-Valley Structure of Daytime Thermally Driven Flows in the Wipp Valley. <i>Journal of Applied Meteorology and Climatology</i> , 2008, 47, 733-751.	0.6	21
46	Horizontal-Velocity and Variance Measurements in the Stable Boundary Layer Using Doppler Lidar: Sensitivity to Averaging Procedures. <i>Journal of Atmospheric and Oceanic Technology</i> , 2008, 25, 1307-1327.	0.5	48
47	Numerical and Experimental Investigation of the Neutral Atmospheric Surface Layer. <i>Journals of the Atmospheric Sciences</i> , 2007, 64, 137-156.	0.6	62
48	Boundary-layer anemometry by optical remote sensing for wind energy applications. <i>Meteorologische Zeitschrift</i> , 2007, 16, 337-347.	0.5	85
49	The Very Stable Boundary Layer on Nights with Weak Low-Level Jets. <i>Journals of the Atmospheric Sciences</i> , 2007, 64, 3068-3090.	0.6	97
50	Comparing the impact of meteorological variability on surface ozone during the NEAQS (2002) and ICARTT (2004) field campaigns. <i>Journal of Geophysical Research</i> , 2007, 112, .	3.3	43
51	Ozone differences between near-coastal and offshore sites in New England: Role of meteorology. <i>Journal of Geophysical Research</i> , 2007, 112, .	3.3	41
52	Nocturnal Low-Level Jet in a Mountain Basin Complex. Part II: Transport and Diffusion of Tracer under Stable Conditions. <i>Journal of Applied Meteorology and Climatology</i> , 2006, 45, 740-753.	0.6	40
53	Turbulent Velocity-Variance Profiles in the Stable Boundary Layer Generated by a Nocturnal Low-Level Jet. <i>Journals of the Atmospheric Sciences</i> , 2006, 63, 2700-2719.	0.6	226
54	A Bad Air Day in Houston. <i>Bulletin of the American Meteorological Society</i> , 2005, 86, 657-670.	1.7	191

#	ARTICLE	IF	CITATIONS
55	The Structure of the Near-Neutral Atmospheric Surface Layer. <i>Journals of the Atmospheric Sciences</i> , 2004, 61, 699-714.	0.6	120
56	Atmospheric Disturbances that Generate Intermittent Turbulence in Nocturnal Boundary Layers. <i>Boundary-Layer Meteorology</i> , 2004, 110, 255-279.	1.2	185
57	Gap flow measurements during the Mesoscale Alpine Programme. <i>Meteorology and Atmospheric Physics</i> , 2004, 86, 99-119.	0.9	36
58	Assimilating Coherent Doppler Lidar Measurements into a Model of the Atmospheric Boundary Layer. Part I: Algorithm Development and Sensitivity to Measurement Error. <i>Journal of Atmospheric and Oceanic Technology</i> , 2004, 21, 1328-1345.	0.5	19
59	Observations of the Temporal Evolution and Spatial Structure of the Gap Flow in the Wipp Valley on 2 and 3 October 1999. <i>Monthly Weather Review</i> , 2004, 132, 2684-2697.	0.5	24
60	Assimilating Coherent Doppler Lidar Measurements into a Model of the Atmospheric Boundary Layer. Part II: Sensitivity Analyses. <i>Journal of Atmospheric and Oceanic Technology</i> , 2004, 21, 1809-1824.	0.5	7
61	Nocturnal Low-Level Jet in a Mountain Basin Complex. Part I: Evolution and Effects on Local Flows. <i>Journal of Applied Meteorology and Climatology</i> , 2004, 43, 1348-1365.	1.7	71
62	A comparison of ground-based Doppler lidar and airborne <I>in situ</I> wind observations above complex terrain. <i>Quarterly Journal of the Royal Meteorological Society</i> , 2003, 129, 693-713.	1.0	11
63	Urban-rural contrasts in mixing height and cloudiness over Nashville in 1999. <i>Journal of Geophysical Research</i> , 2003, 108, n/a-n/a.	3.3	65
64	Mixing-height differences between land use types: Dependence on wind speed. <i>Journal of Geophysical Research</i> , 2003, 108, .	3.3	29
65	Effect of petrochemical industrial emissions of reactive alkenes and NO _x on tropospheric ozone formation in Houston, Texas. <i>Journal of Geophysical Research</i> , 2003, 108, .	3.3	263
66	Shear-Flow Instability in the Stable Nocturnal Boundary Layer as Observed by Doppler Lidar during CASES-99. <i>Journals of the Atmospheric Sciences</i> , 2003, 60, 16-33.	0.6	121
67	Relationship between Low-Level Jet Properties and Turbulence Kinetic Energy in the Nocturnal Stable Boundary Layer. <i>Journals of the Atmospheric Sciences</i> , 2003, 60, 2549-2555.	0.6	132
68	CASES-99: A Comprehensive Investigation of the Stable Nocturnal Boundary Layer. <i>Bulletin of the American Meteorological Society</i> , 2002, 83, 555-581.	1.7	418
69	Vertical variations in O ₃ concentrations before and after a gust front passage. <i>Journal of Geophysical Research</i> , 2002, 107, ACH 9-1.	3.3	26
70	Regional contrast in morning transitions observed during the 1999 Southern Oxidants Study Nashville/Middle Tennessee Intensive. <i>Journal of Geophysical Research</i> , 2002, 107, ACL 21-1-ACL 21-12.	3.3	13
71	Comparisons between Mesoscale Model Terrain Sensitivity Studies and Doppler Lidar Measurements of the Sea Breeze at Monterey Bay. <i>Monthly Weather Review</i> , 2002, 130, 2813-2838.	0.5	48
72	Intermittent Turbulence Associated with a Density Current Passage in the Stable Boundary Layer. <i>Boundary-Layer Meteorology</i> , 2002, 105, 199-219.	1.2	159

#	ARTICLE	IF	CITATIONS
73	Nocturnal Low-Level Jet Characteristics Over Kansas During Cases-99. <i>Boundary-Layer Meteorology</i> , 2002, 105, 221-252.	1.2	302
74	Gap flow in an Alpine valley during a shallow south foehn event: Observations, numerical simulations and hydraulic analogue. <i>Quarterly Journal of the Royal Meteorological Society</i> , 2002, 128, 1173-1210.	1.0	56
75	Turbulence statistics of a Kelvin-Helmholtz billow event observed in the night-time boundary layer during the Cooperative Atmosphere-Surface Exchange Study field program. <i>Dynamics of Atmospheres and Oceans</i> , 2001, 34, 189-204.	0.7	102
76	High-Resolution Doppler Lidar for Boundary Layer and Cloud Research. <i>Journal of Atmospheric and Oceanic Technology</i> , 2001, 18, 376-393.	0.5	177
77	A Comparison of Mixing Depths Observed by Ground-Based Wind Profilers and an Airborne Lidar. <i>Journal of Atmospheric and Oceanic Technology</i> , 1999, 16, 584-590.	0.5	45
78	Multiscale Analysis of a Meso-Frontal Passage in the Complex Terrain of the Colorado Front Range. <i>Monthly Weather Review</i> , 1999, 127, 2062-2082.	0.5	16
79	Wind-Flow Patterns in the Grand Canyon as Revealed by Doppler Lidar. <i>Journal of Applied Meteorology and Climatology</i> , 1999, 38, 1069-1083.	1.7	42
80	Remote sensing of multi-level wind fields with high-energy airborne scanning coherent Doppler lidar. <i>Optics Express</i> , 1998, 2, 40.	1.7	14
81	Daytime buildup and nighttime transport of urban ozone in the boundary layer during a stagnation episode. <i>Journal of Geophysical Research</i> , 1998, 103, 22519-22544.	3.3	141
82	Meteorological conditions during the 1995 Southern Oxidants Study Nashville/Middle Tennessee Field Intensive. <i>Journal of Geophysical Research</i> , 1998, 103, 22225-22243.	3.3	38
83	Ozone production during an urban air stagnation episode over Nashville, Tennessee. <i>Journal of Geophysical Research</i> , 1998, 103, 22555-22568.	3.3	41
84	Characterization of the Nashville urban plume on July 3 and July 18, 1995. <i>Journal of Geophysical Research</i> , 1998, 103, 28129-28148.	3.3	78
85	Daytime Photochemical Pollutant Transport over a Tributary Valley Lake in Southwestern British Columbia. <i>Journal of Applied Meteorology and Climatology</i> , 1998, 37, 393-404.	1.7	20
86	The Multi-center Airborne Coherent Atmospheric Wind Sensor. <i>Bulletin of the American Meteorological Society</i> , 1998, 79, 581-599.	1.7	34
87	Elevated ozone layers and vertical down-mixing over the Lower Fraser Valley, BC. <i>Atmospheric Environment</i> , 1997, 31, 2135-2146.	1.9	78
88	Synoptic variability related to boundary layer and surface features observed during Pacific '93. <i>Atmospheric Environment</i> , 1997, 31, 2163-2173.	1.9	11
89	Nocturnal cleansing flows in a tributary valley. <i>Atmospheric Environment</i> , 1997, 31, 2147-2162.	1.9	77
90	Implications of Small-Scale Flow Features to Modeling Dispersion over Complex Terrain. <i>Journal of Applied Meteorology and Climatology</i> , 1996, 35, 330-342.	1.7	46

#	ARTICLE	IF	CITATIONS
91	Sea Breezes Shallow and Deep on the California Coast. <i>Monthly Weather Review</i> , 1995, 123, 3614-3622.	0.5	54
92	Observations of a Terrain-Forced Mesoscale Vortex and Canyon Drainage Flows along the Front Range of Colorado. <i>Monthly Weather Review</i> , 1995, 123, 2029-2050.	0.5	18
93	Influence of canyon-induced flows on flow and dispersion over adjacent plains. <i>Theoretical and Applied Climatology</i> , 1995, 52, 27-42.	1.3	38
94	Influence of soil moisture on simulations of katabatic flow. <i>Theoretical and Applied Climatology</i> , 1995, 52, 85-94.	1.3	30
95	Two- and Three-Dimensional Simulations of the 9 January 1989 Severe Boulder Windstorm: Comparison with Observations. <i>Journals of the Atmospheric Sciences</i> , 1994, 51, 2317-2343.	0.6	57
96	Evolution of the Monterey Bay Sea-Breeze Layer As Observed by Pulsed Doppler Lidar. <i>Journals of the Atmospheric Sciences</i> , 1993, 50, 3959-3982.	0.6	132
97	Sampling Requirements for Drainage Flows that Transport Atmospheric Contaminants in Complex Terrain. <i>Radiation Protection Dosimetry</i> , 1993, 50, 243-248.	0.4	2
98	Smoke-Column Observations from Two Forest Fires Using Doppler Lidar and Doppler Radar. <i>Journal of Applied Meteorology and Climatology</i> , 1992, 31, 1328-1349.	1.7	110
99	Sensitivity Studies on the Continentality of a Numerically Simulated Cumulonimbus. <i>Journal of Climate and Applied Meteorology</i> , 1987, 26, 275-286.	1.0	6
100	Thunderstorm Genesis Zones in the Colorado Rocky Mountains as Determined by Traceback of Geosynchronous Satellite Images. <i>Monthly Weather Review</i> , 1987, 115, 463-476.	0.5	84
101	Numerical Simulations of the Development of Mountain Cumulus Clouds. <i>Journal of the Meteorological Society of Japan</i> , 1986, 64A, 767-775.	0.7	0
102	Daytime Boundary Layer Evolution over Mountainous Terrain. Part II: Numerical Studies of Upslope Flow Duration. <i>Monthly Weather Review</i> , 1986, 114, 1112-1130.	0.5	45
103	Late-Morning Jump in TKE in the Mixed Layer over a Mountain Basin. <i>Journals of the Atmospheric Sciences</i> , 1985, 42, 407-411.	0.6	23
104	Daytime Boundary-Layer Evolution over Mountainous Terrain. Part 1: Observations of the Dry Circulations. <i>Monthly Weather Review</i> , 1984, 112, 340-356.	0.5	103
105	An Analysis of the Structure of Local Wind Systems in a Broad Mountain Basin. <i>Journal of Applied Meteorology</i> , 1981, 20, 1255-1266.	1.1	77
106	Vertical Wind Velocities from Superpressure Balloons: A Case Study using Eole Data. <i>Monthly Weather Review</i> , 1976, 104, 628-640.	0.5	5
107	Equations and approximations involved in computing vertical wind velocities from superpressure balloon data. <i>Archives for Meteorology, Geophysics and Bioclimatology, Series A</i> , 1976, 25, 19-30.	0.4	0