

Christian Barthlott

List of Publications by Year in descending order

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Version: 2024-02-01

43
papers

1,720
citations

304743

22
h-index

289244

40
g-index

56
all docs

56
docs citations

56
times ranked

1674
citing authors

| # | ARTICLE | IF | CITATIONS |
|----|--|-----|-----------|
| 1 | The Convective and Orographically-Induced Precipitation Study (COPS): the scientific strategy, the field phase, and research highlights. Quarterly Journal of the Royal Meteorological Society, 2011, 137, 3-30. | 2.7 | 181 |
| 2 | Large-eddy simulations over Germany using ICON: a comprehensive evaluation. Quarterly Journal of the Royal Meteorological Society, 2017, 143, 69-100. | 2.7 | 175 |
| 3 | Moist Orographic Convection: Physical Mechanisms and Links to Surface-Exchange Processes. Atmosphere, 2018, 9, 80. | 2.3 | 111 |
| 4 | The Convective Storm Initiation Project. Bulletin of the American Meteorological Society, 2007, 88, 1939-1956. | 3.3 | 110 |
| 5 | Mechanisms initiating deep convection over complex terrain during COPS. Meteorologische Zeitschrift, 2008, 17, 931-948. | 1.0 | 86 |
| 6 | The impact of convergence zones on the initiation of deep convection: A case study from COPS. Atmospheric Research, 2009, 93, 680-694. | 4.1 | 77 |
| 7 | Long-term study of coherent structures in the atmospheric surface layer. Boundary-Layer Meteorology, 2007, 125, 1-24. | 2.3 | 72 |
| 8 | The influence of mesoscale circulation systems on triggering convective cells over complex terrain. Atmospheric Research, 2006, 81, 150-175. | 4.1 | 69 |
| 9 | The HD(CP) ² Observational Prototype Experiment (HOPE) – an overview. Atmospheric Chemistry and Physics, 2017, 17, 4887-4914. | 4.9 | 67 |
| 10 | Initiation of deep convection at marginal instability in an ensemble of mesoscale models: a case study from COPS. Quarterly Journal of the Royal Meteorological Society, 2011, 137, 118-136. | 2.7 | 49 |
| 11 | Processes driving deep convection over complex terrain: a multi-scale analysis of observations from COPS IOP 9c. Quarterly Journal of the Royal Meteorological Society, 2011, 137, 137-155. | 2.7 | 48 |
| 12 | Soil moisture variability and its influence on convective precipitation over complex terrain. Quarterly Journal of the Royal Meteorological Society, 2011, 137, 42-56. | 2.7 | 48 |
| 13 | A Numerical Sensitivity Study on the Impact of Soil Moisture on Convection-Related Parameters and Convective Precipitation over Complex Terrain. Journals of the Atmospheric Sciences, 2011, 68, 2971-2987. | 1.7 | 44 |
| 14 | Sensitivity of deep convection to terrain forcing over Mediterranean islands. Quarterly Journal of the Royal Meteorological Society, 2013, 139, 1762-1779. | 2.7 | 42 |
| 15 | Relative contribution of soil moisture, boundary-layer and microphysical perturbations on convective predictability in different weather regimes. Quarterly Journal of the Royal Meteorological Society, 2019, 145, 3102-3115. | 2.7 | 37 |
| 16 | Model representation of boundary-layer convergence triggering deep convection over complex terrain: A case study from COPS. Atmospheric Research, 2010, 95, 172-185. | 4.1 | 35 |
| 17 | The dependence of convection-related parameters on surface and boundary-layer conditions over complex terrain. Quarterly Journal of the Royal Meteorological Society, 2011, 137, 70-80. | 2.7 | 33 |
| 18 | Impacts of Varying Concentrations of Cloud Condensation Nuclei on Deep Convective Cloud Updrafts – A Multimodel Assessment. Journals of the Atmospheric Sciences, 2021, 78, 1147-1172. | 1.7 | 33 |

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|----|--|-----|-----------|
| 19 | Multi-model simulations of a convective situation in low-mountain terrain in central Europe. <i>Meteorology and Atmospheric Physics</i> , 2009, 103, 95-103. | 2.0 | 31 |
| 20 | The role of Corsica in initiating nocturnal offshore convection. <i>Quarterly Journal of the Royal Meteorological Society</i> , 2016, 142, 222-237. | 2.7 | 30 |
| 21 | Spatial and temporal variability of clouds and precipitation over Germany: multiscale simulations across the "gray zone". <i>Atmospheric Chemistry and Physics</i> , 2015, 15, 12361-12384. | 4.9 | 28 |
| 22 | Observations of Kinematics and Thermodynamic Structure Surrounding a Convective Storm Cluster over a Low Mountain Range. <i>Monthly Weather Review</i> , 2009, 137, 585-602. | 1.4 | 26 |
| 23 | Aerosol Effects on Clouds and Precipitation over Central Europe in Different Weather Regimes. <i>Journals of the Atmospheric Sciences</i> , 2018, 75, 4247-4264. | 1.7 | 24 |
| 24 | Impact of Terrain Heterogeneity on Coherent Structure Properties: Numerical Approach. <i>Boundary-Layer Meteorology</i> , 2009, 133, 71-92. | 2.3 | 21 |
| 25 | Sensitivity of the 2014 Pentecost storms over Germany to different model grids and microphysics schemes. <i>Quarterly Journal of the Royal Meteorological Society</i> , 2017, 143, 1485-1503. | 2.7 | 21 |
| 26 | Turbulence Structure in the Wake Region of a Meteorological Tower. <i>Boundary-Layer Meteorology</i> , 2003, 108, 175-190. | 2.3 | 19 |
| 27 | Impact of terrain heterogeneity on near-surface turbulence structure. <i>Atmospheric Research</i> , 2009, 94, 254-269. | 4.1 | 19 |
| 28 | Soil moisture impacts on convective indices and precipitation over complex terrain. <i>Meteorologische Zeitschrift</i> , 2011, 20, 185-197. | 1.0 | 19 |
| 29 | Forecasting summer convection over the Black Forest: a case study from the Convective and Orographically-induced Precipitation Study (COPS) experiment. <i>Quarterly Journal of the Royal Meteorological Society</i> , 2011, 137, 101-117. | 2.7 | 19 |
| 30 | The precipitation response to variable terrain forcing over low mountain ranges in different weather regimes. <i>Quarterly Journal of the Royal Meteorological Society</i> , 2018, 144, 970-989. | 2.7 | 19 |
| 31 | The effect of secondary ice production parameterization on the simulation of a cold frontal rainband. <i>Atmospheric Chemistry and Physics</i> , 2018, 18, 16461-16480. | 4.9 | 19 |
| 32 | Mechanisms initiating heavy precipitation over Italy during HyMeX Special Observation Period 1: a numerical case study using two mesoscale models. <i>Quarterly Journal of the Royal Meteorological Society</i> , 2016, 142, 238-258. | 2.7 | 18 |
| 33 | Relative impact of aerosol, soil moisture, and orography perturbations on deep convection. <i>Atmospheric Chemistry and Physics</i> , 2019, 19, 12343-12359. | 4.9 | 15 |
| 34 | Emergence and Secondary Instability of Ekman Layer Rolls. <i>Journals of the Atmospheric Sciences</i> , 2008, 65, 2326-2342. | 1.7 | 14 |
| 35 | Impact of upstream flow conditions on the initiation of moist convection over the island of Corsica. <i>Atmospheric Research</i> , 2014, 145-146, 279-296. | 4.1 | 10 |
| 36 | Influence of high-frequency radiation on turbulence measurements on a 200 m tower. <i>Meteorologische Zeitschrift</i> , 2003, 12, 67-71. | 1.0 | 10 |

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|----|--|-----|-----------|
| 37 | Importance of aerosols and shape of the cloud droplet size distribution for convective clouds and precipitation. <i>Atmospheric Chemistry and Physics</i> , 2022, 22, 2153-2172. | 4.9 | 10 |
| 38 | The influence of Sardinia on Corsican rainfall in the western Mediterranean Sea: A numerical sensitivity study. <i>Atmospheric Research</i> , 2015, 153, 451-464. | 4.1 | 8 |
| 39 | La campagne Cops : gen se et cycle de vie de la convection en r gion montagneuse. <i>La M t orologie</i> , 2009, 8, 32. | 0.5 | 6 |
| 40 | Aerosol- and Droplet-Dependent Contact Freezing: Parameterization Development and Case Study. <i>Journals of the Atmospheric Sciences</i> , 2017, 74, 2229-2245. | 1.7 | 5 |
| 41 | Cloud Top Phase Distributions of Simulated Deep Convective Clouds. <i>Journal of Geophysical Research D: Atmospheres</i> , 2018, 123, 10,464. | 3.3 | 4 |
| 42 | Combined effects of soil moisture and microphysical perturbations on convective clouds and precipitation for a locally forced case over Central Europe. <i>Quarterly Journal of the Royal Meteorological Society</i> , 2022, 148, 2132-2146. | 2.7 | 4 |
| 43 | Large impact of tiny model domain shifts for the Pentecost 2014 mesoscale convective system over Germany. <i>Weather and Climate Dynamics</i> , 2020, 1, 207-224. | 3.5 | 3 |