# George C Craig

List of Publications by Year
in descending order



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|---|---|---|---|
| 100 papers | 4,059 citations | 101543 36 h-index | 128289 60 g-index |
| 103 all docs | 103 docs citations | 103 times ranked | 2834 citing authors |

| # | Article | IF | Citations |
|---|---|---|---|
| 1 | Spontaneous Aggregation of Convective Storms. Annual Review of Fluid Mechanics, 2022, 54, 133-157. | 25.0 | 21 |
| 2 | Using neural networks to improve simulations in the gray zone. Nonlinear Processes in Geophysics, 2022, 29, 171-181. | 1.3 | 0 |
| 3 | Distributions and convergence of forecast variables in a 1,000â€member convectionâ€permitting ensemble. Quarterly Journal of the Royal Meteorological Society, 2022, 148, 2325-2343. | 2.7 | 4 |
| 4 | The Transition from Practical to Intrinsic Predictability of Midlatitude Weather. Journals of the Atmospheric Sciences, 2022, 79, 2013-2030. | 1.7 | 7 |
| 5 | Extreme precipitation events over northern Italy. Part <scp>II</scp>: Dynamical precursors. Quarterly Journal of the Royal Meteorological Society, 2021, 147, 1237-1257. | 2.7 | 17 |
| 6 | Effects of coupling a stochastic convective parameterization with the Zhangâ€“McFarlane scheme on precipitation simulation in the DOE E3SMv1.0 atmosphere model. Geoscientific Model Development, 2021, 14, 1575-1593. | 3.6 | 13 |
| 7 | A cold pool perturbation scheme to improve convective initiation in convectionâ€permitting models. Quarterly Journal of the Royal Meteorological Society, 2021, 147, 2429-2447. | 2.7 | 6 |
| 8 | Waves to Weather: Exploring the Limits of Predictability of Weather. Bulletin of the American Meteorological Society, 2021, 102, E2151-E2164. | 3.3 | 5 |
| 9 | Predictability of Deep Convection in Idealized and Operational Forecasts: Effects of Radar Data Assimilation, Orography, and Synoptic Weather Regime. Monthly Weather Review, 2020, 148, 63-81. | 1.4 | 28 |
| 10 | Extreme precipitation events over northern Italy. Part I: A systematic classification with machineâ€learning techniques. Quarterly Journal of the Royal Meteorological Society, 2020, 146, 69-85. | 2.7 | 39 |
| 11 | Coldâ€poolâ€driven convective initiation: using causal graph analysis to determine what convectionâ€permitting models are missing. Quarterly Journal of the Royal Meteorological Society, 2020, 146, 2205-2227. | 2.7 | 38 |
| 12 | Comparison of Methods Accounting for Subgrid-Scale Model Error in Convective-Scale Data Assimilation. Monthly Weather Review, 2020, 148, 2457-2477. | 1.4 | 13 |
| 13 | Quantitative View on the Processes Governing the Upscale Error Growth up to the Planetary Scale Using a Stochastic Convection Scheme. Monthly Weather Review, 2019, 147, 1713-1731. | 1.4 | 28 |
| 14 | Universality in the Spatial Evolution of Self-Aggregation of Tropical Convection. Journals of the Atmospheric Sciences, 2019, 76, 1677-1696. | 1.7 | 17 |
| 15 | Stochastic Parameterization of Processes Leading to Convective Initiation in Kilometer-Scale Models. Monthly Weather Review, 2019, 147, 3917-3934. | 1.4 | 22 |
| 16 | Estimation of the Variability of Mesoscale Energy Spectra with Three Years of COSMO-DE Analyses. Journals of the Atmospheric Sciences, 2019, 76, 627-637. | 1.7 | 13 |
| 17 | Theoretical aspects of upscale error growth on the mesoscales: Idealized numerical simulations. Quarterly Journal of the Royal Meteorological Society, 2018, 144, 682-694. | 2.7 | 12 |
| 18 | Convective-Scale Perturbation Growth across the Spectrum of Convective Regimes. Monthly Weather Review, 2018, 146, 387-405. | 1.4 | 27 |

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|---|---|---|---|
| 19 | Mesoscale Dynamical Regimes in the Midlatitudes. Geophysical Research Letters, 2018, 45, 410-417. | 4.0 | 11 |
| 20 | The North Atlantic Waveguide and Downstream Impact Experiment. Bulletin of the American Meteorological Society, 2018, 99, 1607-1637. | 3.3 | 105 |
| 21 | Visualization of Parameter Sensitivity of 2D Time-Dependent Flow. Lecture Notes in Computer Science, 2018, , 359-370. | 1.3 | 2 |
| 22 | Soil moistureâ€"precipitation coupling over Central Europe: Interactions between surface anomalies at different scales and the dynamical implication. Quarterly Journal of the Royal Meteorological Society, 2018, 144, 2863-2875. | 2.7 | 32 |
| 23 | Variability and Clustering of Midlatitude Summertime Convection: Testing the Craig and Cohen Theory in a Convection-Permitting Ensemble with Stochastic Boundary Layer Perturbations. Journals of the Atmospheric Sciences, 2018, 75, 691-706. | 1.7 | 29 |
| 24 | Structure Function Analysis of Water Vapor Simulated with a Convection-Permitting Model and Comparison to Airborne Lidar Observations. Journals of the Atmospheric Sciences, 2017, 74, 1201-1210. | 1.7 | 2 |
| 25 | Theoretical aspects of upscale error growth through the mesoscales: an analytical model. Quarterly Journal of the Royal Meteorological Society, 2017, 143, 3048-3059. | 2.7 | 20 |
| 26 | Characterizing noise and spurious convection in convective data assimilation. Quarterly Journal of the Royal Meteorological Society, 2017, 143, 3060-3069. | 2.7 | 10 |
| 27 | Physically Based Stochastic Perturbations (PSP) in the Boundary Layer to Represent Uncertainty in Convective Initiation. Journals of the Atmospheric Sciences, 2016, 73, 2893-2911. | 1.7 | 38 |
| 28 | Testing particle filters on simple convectiveâ€scale models. PartÂ2: AÂmodified shallowâ€water model. Quarterly Journal of the Royal Meteorological Society, 2016, 142, 1628-1646. | 2.7 | 5 |
| 29 | Testing particle filters on simple convectiveâ€scale models Part I: A stochastic cloud model. Quarterly Journal of the Royal Meteorological Society, 2016, 142, 1439-1452. | 2.7 | 2 |
| 30 | Stochastic convective parameterization improving the simulation of tropical precipitation variability in the NCAR CAM5. Geophysical Research Letters, 2016, 43, 6612-6619. | 4.0 | 47 |
| 31 | Characterisation of convective regimes over the British Isles. Quarterly Journal of the Royal Meteorological Society, 2016, 142, 1541-1553. | 2.7 | 20 |
| 32 | Convective and Slantwise Trajectory Ascent in Convection-Permitting Simulations of Midlatitude Cyclones. Monthly Weather Review, 2016, 144, 3961-3976. | 1.4 | 20 |
| 33 | Examination of a Stochastic and Deterministic Convection Parameterization in the COSMO Model. Monthly Weather Review, 2015, 143, 4088-4103. | 1.4 | 7 |
| 34 | Upscale Error Growth in a High-Resolution Simulation of a Summertime Weather Event over Europe*. Monthly Weather Review, 2015, 143, 813-827. | 1.4 | 88 |
| 35 | Simulation of upscale error growth with a stochastic convection scheme. Geophysical Research Letters, 2015, 42, 3056-3062. | 4.0 | 25 |
| 36 | A simple dynamical model of cumulus convection for data assimilation research. Meteorologische Zeitschrift, 2014, 23, 483-490. | 1.0 | 28 |

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|---|---|---|---|
| 37 | The Plantâ€“Craig Stochastic Convection Scheme in ICON and Its Scale Adaptivity. Journals of the Atmospheric Sciences, 2014, 71, 3404-3415. | 1.7 | 21 |
| 38 | The impact of downscaled initial condition perturbations on convectiveâ€scale ensemble forecasts of precipitation. Quarterly Journal of the Royal Meteorological Society, 2014, 140, 1552-1562. | 2.7 | 87 |
| 39 | Aspects of shortâ€term probabilistic blending in different weather regimes. Quarterly Journal of the Royal Meteorological Society, 2014, 140, 1179-1188. | 2.7 | 17 |
| 40 | The convective adjustment timeâ€scale as indicator of predictability of convective precipitation. Quarterly Journal of the Royal Meteorological Society, 2014, 140, 480-490. | 2.7 | 79 |
| 41 | Combining probabilistic precipitation forecasts from a nowcasting technique with a time-lagged ensemble. Meteorological Applications, 2014, 21, 230-240. | 2.1 | 13 |
| 42 | The Impact of Data Assimilation Length Scales on Analysis and Prediction of Convective Storms. Monthly Weather Review, 2014, 142, 3781-3808. | 1.4 | 42 |
| 43 | The impact of localization and observation averaging for convectiveâ€scale data assimilation in a simple stochastic model. Quarterly Journal of the Royal Meteorological Society, 2013, 139, 515-523. | 2.7 | 6 |
| 44 | A coarsening model for selfâ€organization of tropical convection. Journal of Geophysical Research D: Atmospheres, 2013, 118, 8761-8769. | 3.3 | 65 |
| 45 | Horizontal structure function and vertical correlation analysis of mesoscale water vapor variability observed by airborne lidar. Journal of Geophysical Research D: Atmospheres, 2013, 118, 7579-7590. | 3.3 | 21 |
| 46 | Ensemble forecasting with a stochastic convective parametrization based on equilibrium statistics. Atmospheric Chemistry and Physics, 2012, 12, 4555-4565. | 4.9 | 22 |
| 47 | Heightâ€resolved variability of midlatitude tropospheric water vapor measured by an airborne lidar. Geophysical Research Letters, 2012, 39, . | 4.0 | 11 |
| 48 | Constraints on the impact of radar rainfall data assimilation on forecasts of cumulus convection. Quarterly Journal of the Royal Meteorological Society, 2012, 138, 340-352. | 2.7 | 28 |
| 49 | Blending a probabilistic nowcasting method with a highâ€resolution numerical weather prediction ensemble for convective precipitation forecasts. Quarterly Journal of the Royal Meteorological Society, 2012, 138, 755-768. | 2.7 | 54 |
| 50 | Caseâ€toâ€case variability of predictability of deep convection in a mesoscale model. Quarterly Journal of the Royal Meteorological Society, 2012, 138, 638-648. | 2.7 | 31 |
| 51 | Probabilistic Weather Forecasting. Research Topics in Aerospace, 2012, , 661-673. | 0.7 | 1 |
| 52 | Classification of precipitation events with a convective response timescale and their forecasting characteristics. Geophysical Research Letters, 2011, 38, n/a-n/a. | 4.0 | 44 |
| 53 | Classifying severe rainfall events over Italy by hydrometeorological and dynamical criteria. Quarterly Journal of the Royal Meteorological Society, 2011, 137, 148-154. | 2.7 | 48 |
| 54 | The Convective and Orographicallyâ€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 |

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|---|---|---|---|
| 55 | Best Member Selection for convective-scale ensembles. Meteorologische Zeitschrift, 2011, 20, 153-164. | 1.0 | 7 |
| 56 | Regime-dependent forecast uncertainty of convective precipitation. Meteorologische Zeitschrift, 2011, 20, 145-151. | 1.0 | 31 |
| 57 | Validating precipitation forecasts using remote sensor synergy: A case study approach. Meteorologische Zeitschrift, 2010, 19, 601-617. | 1.0 | 9 |
| 58 | A Displacement and Amplitude Score Employing an Optical Flow Technique. Weather and Forecasting, 2009, 24, 1297-1308. | 1.4 | 58 |
| 59 | Sensitivity of quantitative precipitation forecast to height dependent changes in humidity. Geophysical Research Letters, 2008, 35, . | 4.0 | 37 |
| 60 | RESEARCH CAMPAIGN: The Convective and Orographically Induced Precipitation Study. Bulletin of the American Meteorological Society, 2008, 89, 1477-1486. | 3.3 | 194 |
| 61 | A Polarimetric Radar Forward Operator for Model Evaluation. Journal of Applied Meteorology and Climatology, 2008, 47, 3202-3220. | 1.5 | 38 |
| 62 | A Stochastic Parameterization for Deep Convection Based on Equilibrium Statistics. Journals of the Atmospheric Sciences, 2008, 65, 87-105. | 1.7 | 245 |
| 63 | Entrainment in Cumulus Clouds: What Resolution is Cloud-Resolving?. Journals of the Atmospheric Sciences, 2008, 65, 3978-3988. | 1.7 | 58 |
| 64 | A Displacement-Based Error Measure Applied in a Regional Ensemble Forecasting System. Monthly Weather Review, 2007, 135, 3248-3259. | 1.4 | 65 |
| 65 | Fluctuations in an Equilibrium Convective Ensemble. Part II: Numerical Experiments. Journals of the Atmospheric Sciences, 2006, 63, 2005-2015. | 1.7 | 56 |
| 66 | Fluctuations in an Equilibrium Convective Ensemble. Part I: Theoretical Formulation. Journals of the Atmospheric Sciences, 2006, 63, 1996-2004. | 1.7 | 82 |
| 67 | Mesoscale simulations of organized convection: Importance of convective equilibrium. Quarterly Journal of the Royal Meteorological Society, 2006, 132, 737-756. | 2.7 | 95 |
| 68 | The Extratropical Transition of Tropical Cyclone Lili (1996) and Its Crucial Contribution to a Moderate Extratropical Development. Monthly Weather Review, 2005, 133, 1562-1573. | 1.4 | 36 |
| 69 | The extratropical transition of hurricane <I>Irene</I> (1999): A potential-vorticity perspective. Quarterly Journal of the Royal Meteorological Society, 2004, 130, 1047-1074. | 2.7 | 70 |
| 70 | The response time of a convective cloud ensemble to a change in forcing. Quarterly Journal of the Royal Meteorological Society, 2004, 130, 933-944. | 2.7 | 43 |
| 71 | The dynamics of a midlatitude cyclone with very strong latent-heat release. Quarterly Journal of the Royal Meteorological Society, 2004, 130, 295-323. | 2.7 | 110 |
| 72 | Mass and water transport into the tropical stratosphere: A cloud-resolving simulation. Journal of Geophysical Research, 2004, 109, . | 3.3 | 32 |

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|---|---|---|---|
| 73 | On a threefold classification of extratropical cyclogenesis. Quarterly Journal of the Royal Meteorological Society, 2003, 129, 2989-3012. | 2.7 | 54 |
| 74 | On the temperature structure of the tropical substratosphere. Journal of Geophysical Research, 2002, 107, ACL 10-1. | 3.3 | 92 |
| 75 | Poleward heat transport by the atmospheric heat engine. Nature, 2002, 415, 774-777. | 27.8 | 66 |
| 76 | A scaling hypothesis for moist convective updraughts. Quarterly Journal of the Royal Meteorological Society, 2001, 127, 1551-1570. | 2.7 | 5 |
| 77 | A scaling hypothesis for moist convective updraughts. Quarterly Journal of the Royal Meteorological Society, 2001, 127, 1551-1570. | 2.7 | 0 |
| 78 | Stratospheric Influence on Tropopause Height: The Radiative Constraint. Journals of the Atmospheric Sciences, 2000, 57, 17-28. | 1.7 | 122 |
| 79 | A GCM Investigation into the Nature of Baroclinic Adjustment. Journals of the Atmospheric Sciences, 2000, 57, 1141-1155. | 1.7 | 29 |
| 80 | The hurricane-like Mediterranean cyclone of January 1995. Meteorological Applications, 2000, 7, 261-279. | 2.1 | 73 |
| 81 | Evolution and mesoscale structure of a polar low outbreak. Quarterly Journal of the Royal Meteorological Society, 2000, 126, 1031-1064. | 2.7 | 2 |
| 82 | Study of the Hurricane-like Mediterranean cyclone of January 1995. Physics and Chemistry of the Earth, 1999, 24, 627-632. | 0.3 | 32 |
| 83 | Sensitivity of Tropical Convection to Sea Surface Temperature in the Absence of Large-Scale Flow. Journal of Climate, 1999, 12, 462-476. | 3.2 | 83 |
| 84 | A simple theoretical model for the intensification of tropical cyclones and polar lows. Quarterly Journal of the Royal Meteorological Society, 1998, 124, 919-947. | 2.7 | 31 |
| 85 | The role of mass transfer in describing the dynamics of mesoscale convective systems. Quarterly Journal of the Royal Meteorological Society, 1998, 124, 1183-1207. | 2.7 | 10 |
| 86 | Radiativeâ€“convective equilibrium in a three-dimensional cloud-ensemble model. Quarterly Journal of the Royal Meteorological Society, 1998, 124, 2073-2097. | 2.7 | 136 |
| 87 | Time-scales of adjustment to radiative-convective equilibrium in the tropical atmosphere. Quarterly Journal of the Royal Meteorological Society, 1998, 124, 2693-2713. | 2.7 | 30 |
| 88 | Time-scales of adjustments to radiative-convective equilibrium in the tropical atmosphere. Quarterly Journal of the Royal Meteorological Society, 1998, 124, 2693-2713. | 2.7 | 15 |
| 89 | Radiative-convective equilibrium in a three-dimensional cloud-ensemble model. Quarterly Journal of the Royal Meteorological Society, 1998, 124, 2073-2097. | 2.7 | 57 |
| 90 | GCM Tests of Theories for the Height of the Tropopause. Journals of the Atmospheric Sciences, 1997, 54, 869-882. | 1.7 | 101 |

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|---|---|---|---|
| 91 | A comparison of two bulk microphysical schemes and their effects on radiative transfer using a single-column model. Quarterly Journal of the Royal Meteorological Society, 1997, 123, 1561-1601. | 2.7 | 0 |
| 92 | CISK or WISHE as the Mechanism for Tropical Cyclone Intensification. Journals of the Atmospheric Sciences, 1996, 53, 3528-3540. | 1.7 | 137 |
| 93 | Numerical experiments on radiation and tropical cyclones. Quarterly Journal of the Royal Meteorological Society, 1996, 122, 415-422. | 2.7 | 24 |
| 94 | Dimensional analysis of a convecting atmosphere in equilibrium with external forcing. Quarterly Journal of the Royal Meteorological Society, 1996, 122, 1963-1967. | 2.7 | 27 |
| 95 | Radiation and polar lows. Quarterly Journal of the Royal Meteorological Society, 1995, 121, 79-94. | 2.7 | 12 |
| 96 | Radiation and polar lows. Quarterly Journal of the Royal Meteorological Society, 1995, 121, 79-94. | 2.7 | 0 |
| 97 | A Scaling for the Three-Dimensional Semigeostrophic Approximation. Journals of the Atmospheric Sciences, 1993, 50, 3350-3355. | 1.7 | 13 |
| 98 | Cumulus Convection and CISK in Midlatitudes. Part II: Comma-Cloud Formation in Cyclonic Shear Regions. Journals of the Atmospheric Sciences, 1992, 49, 1318-1333. | 1.7 | 8 |
| 99 | A Study of Two Cases of Comma-Cloud Cyclogenesis Using a Semigeostrophic Model. Monthly Weather Review, 1992, 120, 2942-2961. | 1.4 | 3 |
| 100 | Cumulus Heating and CISK in the Extratropical Atmosphere. Part I: Polar Lows and Comma Clouds. Journals of the Atmospheric Sciences, 1988, 45, 2622-2640. | 1.7 | 38 |