# Claude R Duguay

List of Publications by Year
in descending order



| 124 | 4,551 | 101543 | 123424 |
|---|---|---|---|
| papers | citations | 36 h-index | 61 g-index |

| 135 | 135 | 135 | 3760 |
|---|---|---|---|
| all docs | docs citations | times ranked | citing authors |

| # | Article | IF | Citations |
|---|---|---|---|
| 1 | Impact of satellite-based lake surface observations on the initial state of HIRLAM. Part I: evaluation of remotely-sensed lake surface water temperature observations. Tellus, Series A: Dynamic Meteorology and Oceanography, 2022, 66, 21534. | 1.7 | 11 |
| 2 | Evolution of snow and ice temperature, thickness and energy balance in Lake OrajÃ¤rvi, northern Finland. Tellus, Series A: Dynamic Meteorology and Oceanography, 2022, 66, 21564. | 1.7 | 43 |
| 3 | Impact of satellite-based lake surface observations on the initial state of HIRLAM. Part II: Analysis of lake surface temperature and ice cover. Tellus, Series A: Dynamic Meteorology and Oceanography, 2022, 66, 21395. | 1.7 | 10 |
| 4 | Impact of partly ice-free Lake Ladoga on temperature and cloudiness in an anticyclonic winter situation â€“ a case study using a limited area model. Tellus, Series A: Dynamic Meteorology and Oceanography, 2022, 66, 23929. | 1.7 | 24 |
| 5 | Impact of Spectral Resolution on Quantifying Cyanobacteria in Lakes and Reservoirs: A Machine-Learning Assessment. IEEE Transactions on Geoscience and Remote Sensing, 2022, 60, 1-20. | 6.3 | 8 |
| 6 | Incorporating Aleatoric Uncertainties in Lake Ice Mapping Using RADARSATâ€“2 SAR Images and CNNs. Remote Sensing, 2022, 14, 644. | 4.0 | 5 |
| 7 | Improvement of field fluorometry estimates of chlorophyll a concentration in a cyanobacteriaâ€rich eutrophic lake. Limnology and Oceanography: Methods, 2022, 20, 193-209. | 2.0 | 7 |
| 8 | A New Approach for the Estimation of Lake Ice Thickness From Conventional Radar Altimetry. IEEE Transactions on Geoscience and Remote Sensing, 2022, 60, 1-15. | 6.3 | 5 |
| 9 | A 41-year (1979â€“2019) passive-microwave-derived lake ice phenology data record of the Northern Hemisphere. Earth System Science Data, 2022, 14, 3329-3347. | 9.9 | 6 |
| 10 | Identifying groundwater discharge zones in the Central Mackenzie Valley using remotely sensed optical and thermal imagery. Canadian Journal of Earth Sciences, 2021, 58, 105-121. | 1.3 | 4 |
| 11 | Assessment of machine learning classifiers for global lake ice cover mapping from MODIS TOA reflectance data. Remote Sensing of Environment, 2021, 253, 112206. | 11.0 | 40 |
| 12 | 50 years of lake ice research from active microwave remote sensing: Progress and prospects. Remote Sensing of Environment, 2021, 264, 112616. | 11.0 | 38 |
| 13 | Support Vector Regression for Chlorophyll-A Estimation Using Sentinel-2 Images in Small Waterbodies. , 2021, , . | | 8 |
| 14 | Deep convolutional neural network with random field model for lake ice mapping from Sentinel-1 imagery. International Journal of Remote Sensing, 2021, 42, 9351-9375. | 2.9 | 1 |
| 15 | River ice phenology and thickness from satellite altimetry: potential for ice bridge road operation and climate studies. Cryosphere, 2021, 15, 5387-5407. | 3.9 | 12 |
| 16 | Application of GNSS Interferometric Reflectometry for the Estimation of Lake Ice Thickness. Remote Sensing, 2020, 12, 2721. | 4.0 | 16 |
| 17 | Influence of surface water on coarse resolution C-band backscatter: Implications for freeze/thaw retrieval from scatterometer data. Remote Sensing of Environment, 2020, 247, 111911. | 11.0 | 7 |
| 18 | Lake Ice-Water Classification of RADARSAT-2 Images by Integrating IRGS Segmentation with Pixel-Based Random Forest Labeling. Remote Sensing, 2020, 12, 1425. | 4.0 | 29 |

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| 19 | Assessing the Performance of Methods for Monitoring Ice Phenology of the Worldâ€™s Largest High Arctic Lake Using High-Density Time Series Analysis of Sentinel-1 Data. Remote Sensing, 2020, 12, 382. | 4.0 | 17 |
| 20 | The catastrophic thermokarst lake drainage events of 2018 in northwestern Alaska: fast-forward into the future. Cryosphere, 2020, 14, 4279-4297. | 3.9 | 51 |
| 21 | Assessment of coupled CRCM5â€“FLake on the reproduction of wintertime lake-induced precipitation in the Great Lakes Basin. Theoretical and Applied Climatology, 2019, 138, 77-96. | 2.8 | 5 |
| 22 | Remote Sensing of Environmental Changes in Cold Regions: Methods, Achievements and Challenges. Remote Sensing, 2019, 11, 1952. | 4.0 | 34 |
| 23 | Advancement in Bedfast Lake ICE Mapping From Sentinel-1 Sar Data. , 2019, , . | | 2 |
| 24 | Megaripples at Wau-an-Namus, Libya: A new analog for similar features on Mars. Icarus, 2019, 319, 840-851. | 2.5 | 29 |
| 25 | Observing Scattering Mechanisms of Bubbled Freshwater Lake Ice Using Polarimetric RADARSAT-2 (C-Band) and UW-Scat (X- and Ku-Bands). IEEE Transactions on Geoscience and Remote Sensing, 2018, 56, 2887-2903. | 6.3 | 27 |
| 26 | Historical Spatiotemporal Trends in Snowfall Extremes over the Canadian Domain of the Great Lakes Basin. Advances in Meteorology, 2018, 2018, 1-20. | 1.6 | 8 |
| 27 | Climatological trends of snowfall over the Laurentian Great Lakes Basin. International Journal of Climatology, 2018, 38, 3942-3962. | 3.5 | 24 |
| 28 | Semi-Automated Classification of Lake Ice Cover Using Dual Polarization RADARSAT-2 Imagery. Remote Sensing, 2018, 10, 1727. | 4.0 | 18 |
| 29 | Geophysical and atmospheric controls on Ku-, X- and C-band backscatter evolution from a saline snow cover on first-year sea ice from late-winter to pre-early melt. Remote Sensing of Environment, 2017, 198, 425-441. | 11.0 | 13 |
| 30 | Improvement of Lake Ice Thickness Retrieval From MODIS Satellite Data Using a Thermodynamic Model. IEEE Transactions on Geoscience and Remote Sensing, 2017, 55, 5956-5965. | 6.3 | 19 |
| 31 | Towards improved objective analysis of lake surface water temperature in a NWP model: preliminary assessment of statistical properties. Tellus, Series A: Dynamic Meteorology and Oceanography, 2017, 69, 1313025. | 1.7 | 4 |
| 32 | Satellite-derived light extinction coefficient and its impact on thermal structure simulations in a 1-D lake model. Hydrology and Earth System Sciences, 2017, 21, 377-391. | 4.9 | 14 |
| 33 | Satellite microwave assessment of Northern Hemisphere lake ice phenology from 2002 to 2015. Cryosphere, 2017, 11, 47-63. | 3.9 | 54 |
| 34 | Investigating the Influence of Variable Freshwater Ice Types on Passive and Active Microwave Observations. Remote Sensing, 2017, 9, 1242. | 4.0 | 5 |
| 35 | Evidence of recent changes in the ice regime of lakes in the Canadian High Arctic from spaceborne satellite observations. Cryosphere, 2016, 10, 941-960. | 3.9 | 27 |
| 36 | Monitoring ice break-up on the Mackenzie River using MODIS data. Cryosphere, 2016, 10, 569-584. | 3.9 | 14 |

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| 37 | Estimation of Water Quality Parameters in Lake Erie from MERIS Using Linear Mixed Effect Models. Remote Sensing, 2016, 8, 473. | 4.0 | 18 |
| 38 | Monitoring Bedfast Ice and Ice Phenology in Lakes of the Lena River Delta Using TerraSAR-X Backscatter and Coherence Time Series. Remote Sensing, 2016, 8, 903. | 4.0 | 32 |
| 39 | Ku-, X- and C-band measured and modeled microwave backscatter from a highly saline snow cover on first-year sea ice. Remote Sensing of Environment, 2016, 187, 62-75. | 11.0 | 29 |
| 40 | Evaluation of regional-scale snow albedo characteristics during winter season from 2003 to 2014. , 2015, , . | | 0 |
| 41 | Spatio-temporal influence of tundra snow properties on Ku-band (17.2 GHz) backscatter. Journal of Glaciology, 2015, 61, 267-279. | 2.2 | 37 |
| 42 | Ice Freeze-up and Break-up Detection of Shallow Lakes in Northern Alaska with Spaceborne SAR. Remote Sensing, 2015, 7, 6133-6159. | 4.0 | 30 |
| 43 | Observation and Modeling of X- and Ku-Band Backscatter of Snow-Covered Freshwater Lake Ice. IEEE Journal of Selected Topics in Applied Earth Observations and Remote Sensing, 2015, 8, 3629-3642. | 4.9 | 17 |
| 44 | Microwave Backscatter From Arctic Lake Ice and Polarimetric Implications. IEEE Transactions on Geoscience and Remote Sensing, 2015, 53, 5972-5982. | 6.3 | 46 |
| 45 | Freshwater lake ice thickness derived using surface-based X- and Ku-band FMCW scatterometers. Cold Regions Science and Technology, 2015, 120, 115-126. | 3.5 | 29 |
| 46 | Response of ice cover on shallow lakes of the North Slope of Alaska to contemporary climate conditions (1950â€“2011): radar remote-sensing and numerical modeling data analysis. Cryosphere, 2014, 8, 167-180. | 3.9 | 107 |
| 47 | Ground-based scatterometer observations of snow-covered freshwater lake ice using UW-SCAT (9.6/17.2 GHz). , 2014, , . | | 0 |
| 48 | Observed and Projected Climate Change in the Churchill Region of the Hudson Bay Lowlands and Implications for Pond Sustainability. Arctic, Antarctic, and Alpine Research, 2014, 46, 272-285. | 1.1 | 22 |
| 49 | Estimation of ice thickness on large northern lakes from AMSR-E brightness temperature measurements. Remote Sensing of Environment, 2014, 150, 1-19. | 11.0 | 31 |
| 50 | Ice Characteristics and Processes, and Remote Sensing of Frozen Rivers and Lakes. Geophysical Monograph Series, 2013, , 63-90. | 0.1 | 29 |
| 51 | UW-Scat: A Ground-Based Dual-Frequency Scatterometer for Observation of Snow Properties. IEEE Geoscience and Remote Sensing Letters, 2013, 10, 528-532. | 3.1 | 26 |
| 52 | Remote Sensing of Snow Cover. Geophysical Monograph Series, 2013, , 7-38. | 0.1 | 7 |
| 53 | Subnivean Arctic and sub-Arctic net ecosystem exchange (NEE). Progress in Physical Geography, 2013, 37, 484-515. | 3.2 | 7 |
| 54 | COREH2O: High-resolution X/Ku-band radar imaging of cold land processes. , 2013, , . | | 2 |

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| 55 | Pan-Arctic linkages between snow accumulation and growing-season air temperature, soil moisture and vegetation. Biogeosciences, 2013, 10, 7575-7597. | 3.3 | 12 |
| 56 | Comparison of MODIS-derived land surface temperatures with ground surface and air temperature measurements in continuous permafrost terrain. Cryosphere, 2012, 6, 51-69. | 3.9 | 121 |
| 57 | CoReH<inf>2</inf>O, a dual frequency radar mission for snow and ice observations. , 2012, , . | | 7 |
| 58 | Modelling Lake Ice Phenology with an Examination of Satellite-Detected Subgrid Cell Variability. Advances in Meteorology, 2012, 2012, 1-19. | 1.6 | 25 |
| 59 | State of the Climate in 2011. Bulletin of the American Meteorological Society, 2012, 93, S1-S282. | 3.3 | 121 |
| 60 | Variability and change in the Canadian cryosphere. Climatic Change, 2012, 115, 59-88. | 3.6 | 79 |
| 61 | Spatially distributed dual frequency (17.2 and 9.2 GHZ) scatterometer observations of shallow tundra snow. , 2012, , . | | 0 |
| 62 | Quantifying the relationships between lake fraction, snow water equivalent and snow depth, and microwave brightness temperatures in an arctic tundra landscape. Remote Sensing of Environment, 2012, 127, 329-340. | 11.0 | 9 |
| 63 | Pan-Arctic Land Surface Temperature from MODIS and AATSR: Product Development and Intercomparison. Remote Sensing, 2012, 4, 3833-3856. | 4.0 | 31 |
| 64 | Estimating ice phenology on large northern lakes from AMSR-E: algorithm development and application to Great Bear Lake and Great Slave Lake, Canada. Cryosphere, 2012, 6, 235-254. | 3.9 | 42 |
| 65 | Bootstrap-based tests for trends in hydrological time series, with application to ice phenology data. Journal of Hydrology, 2011, 410, 150-161. | 5.4 | 50 |
| 66 | Arctic Freshwater Ice and Its Climatic Role. Ambio, 2011, 40, 46-52. | 5.5 | 40 |
| 67 | Past and Future Changes in Arctic Lake and River Ice. Ambio, 2011, 40, 53-62. | 5.5 | 105 |
| 68 | Effects of Changes in Arctic Lake and River Ice. Ambio, 2011, 40, 63-74. | 5.5 | 123 |
| 69 | A comparison of simulated and measured lake ice thickness using a Shallow Water Ice Profiler. Hydrological Processes, 2011, 25, 2932-2941. | 2.6 | 34 |
| 70 | Evaluation of the HUT modified snow emission model over lake ice using airborne passive microwave measurements. Remote Sensing of Environment, 2011, 115, 233-244. | 11.0 | 19 |
| 71 | Integrated observations of lake ice at Nam Co on the Tibetan Plateau from 2001 to 2009. , 2011, , . | | 5 |
| 72 | CoReH<inf>2</inf>0, a dual frequency radar satellite for COld REgions Hydrology. , 2011, , . | | 0 |

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| 73 | The fate of lake ice in the North American Arctic. Cryosphere, 2011, 5, 869-892. | 3.9 | 50 |
| 74 | Cold Regions Hydrology High-Resolution Observatory for Snow and Cold Land Processes. Proceedings of the IEEE, 2010, 98, 752-765. | 21.3 | 148 |
| 75 | Sensitivity of AMSR-E Brightness Temperatures to the Seasonal Evolution of Lake Ice Thickness. IEEE Geoscience and Remote Sensing Letters, 2010, 7, 751-755. | 3.1 | 34 |
| 76 | Use of Synthetic Aperture Radar (SAR) to Identify and Characterize Overwintering Areas of Fish in Iceâ€Covered Arctic Rivers: A Demonstration with Broad Whitefish and Their Habitats in the Sagavanirktok River, Alaska. Transactions of the American Fisheries Society, 2010, 139, 1711-1722. | 1.4 | 20 |
| 77 | CoReH<inf>2</inf>O - Cold Regions Hydrology High-esolution Observatory. , 2009, , . | | 3 |
| 78 | Variability in ice phenology on Great Bear Lake and Great Slave Lake, Northwest Territories, Canada, from SeaWinds/QuikSCAT: 2000â€“2006. Remote Sensing of Environment, 2009, 113, 816-834. | 11.0 | 78 |
| 79 | Using the MODIS land surface temperature product for mapping permafrost: an application to northern QuÃ©bec and Labrador, Canada. Permafrost and Periglacial Processes, 2009, 20, 407-416. | 3.4 | 71 |
| 80 | Sea ice conditions and melt season duration variability within the Canadian Arctic Archipelago: 1979â€“2008. Geophysical Research Letters, 2009, 36, . | 4.0 | 95 |
| 81 | Holocene Evolution of Lakes in the Bluefish Basin, Northern Yukon, Canada. Arctic, 2009, 62, . | 0.4 | 23 |
| 82 | Contemporary (1951â€“2001) Evolution of Lakes in the Old Crow Basin, Northern Yukon, Canada: Remote Sensing, Numerical Modeling, and Stable Isotope Analysis. Arctic, 2009, 62, . | 0.4 | 87 |
| 83 | The Potential Use of Synthetic Aperture Radar for Estimating Methane Ebullition From Arctic Lakes<sup>1</sup>. Journal of the American Water Resources Association, 2008, 44, 305-315. | 2.4 | 32 |
| 84 | Changing sea ice melt parameters in the Canadian Arctic Archipelago: Implications for the future presence of multiyear ice. Journal of Geophysical Research, 2008, 113, . | 3.3 | 38 |
| 85 | The Influence of Lakes on the Regional Energy and Water Balance of the Central Mackenzie River Basin. , 2008, , 309-325. | | 20 |
| 86 | Climate-Lake Interactions. , 2008, , 139-160. | | 25 |
| 87 | River-ice break-up/freeze-up: a review of climatic drivers, historical trends and future predictions. Annals of Glaciology, 2007, 46, 443-451. | 1.4 | 65 |
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| 89 | Impacts of large-scale teleconnections on freshwater-ice break/freeze-up dates over Canada. Journal of Hydrology, 2006, 330, 340-353. | 5.4 | 117 |
| 90 | Uncertainty in snow mass retrievals from satellite passive microwave data in lake-rich high-latitude environments. Hydrological Processes, 2006, 20, 1019-1022. | 2.6 | 23 |

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| 92 | Lake ice growth and decay in central Alaska, USA: observations and computer simulations compared. Annals of Glaciology, 2005, 40, 195-199. | 1.4 | 38 |
| 93 | Mapping lichen in a caribou habitat of Northern Quebec, Canada, using an enhancement_classification method and spectral mixture analysis. Remote Sensing of Environment, 2005, 94, 232-243. | 11.0 | 45 |
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| 96 | Lichen mapping in the summer range of the George River caribou herd using Landsat TM imagery. Canadian Journal of Remote Sensing, 2004, 30, 867-881. | 2.4 | 16 |
| 97 | Mapping lichen changes in the summer range of the George River Caribou Herd (QuÃ©bec-Labrador,) Tj ETQq1 1 0.784314 rgBT /Ove | 0.6 | 5 |
| 98 | Ice-cover variability on shallow lakes at high latitudes: model simulations and observations. Hydrological Processes, 2003, 17, 3465-3483. | 2.6 | 165 |
| 99 | Use of passive-microwave data to monitor spatial and temporal variations of snow cover at tree line near Churchill, Manitoba, Canada. Annals of Glaciology, 2002, 34, 58-64. | 1.4 | 10 |
| 100 | Response of the Porcupine and Old Crow rivers in northern Yukon, Canada, to Holocene climatic change. Holocene, 2002, 12, 27-34. | 1.7 | 29 |
| 101 | RADARSAT backscatter characteristics of ice growing on shallow sub-Arctic lakes, Churchill, Manitoba, Canada. Hydrological Processes, 2002, 16, 1631-1644. | 2.6 | 87 |
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| 104 | The effect of soil and crop residue characteristics on polarimetric radar response. Remote Sensing of Environment, 2002, 80, 308-320. | 11.0 | 86 |
| 105 | Utilisation d'un gÃ©oradar pour l'Ã©tude du couvert nival Ã  la limite des arbres, Churchill, Manitoba. Houille Blanche, 2002, 88, 92-97. | 0.3 | 1 |
| 106 | Defining the Sensitivity of Multi-Frequency and Multi-Polarized Radar Backscatter to Post-Harvest Crop Residue. Canadian Journal of Remote Sensing, 2001, 27, 247-263. | 2.4 | 42 |
| 107 | Detection of Permafrost Features Using SPOT Panchromatic Imagery, Fosheim Peninsula, Ellesmere Island, N.W.T.. Canadian Journal of Remote Sensing, 1999, 25, 34-44. | 2.4 | 18 |
| 108 | CRYSYS - Use of the Cryospheric System to Monitor Global Change in Canada: Overview and Progress. Canadian Journal of Remote Sensing, 1999, 25, 3-11. | 2.4 | 8 |

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| 109 | Radiation balance of wetland tundra at northern treeline estimated from remotely sensed data. Climate Research, 1999, 13, 77-90. | 1.1 | 3 |
| 110 | Spatial and Temporal Variations in Surface Albedo of a Subarctic Landscape Using Surface-Based Measurements and Remote Sensing. Arctic and Alpine Research, 1997, 29, 261. | 1.3 | 29 |
| 111 | A Neural Network Method to Determine the Presence or Absence of Permafrost near Mayo, Yukon Territory, Canada. Permafrost and Periglacial Processes, 1997, 8, 205-215. | 3.4 | 40 |
| 112 | A Neural Network Method to Determine the Presence or Absence of Permafrost near Mayo, Yukon Territory, Canada. Permafrost and Periglacial Processes, 1997, 8, 205-215. | 3.4 | 1 |
| 113 | Comparison of Evidential Reasoning and Neural Network Approaches in a Multi-source Classification of Alpine Tundra Vegetation. Canadian Journal of Remote Sensing, 1996, 22, 433-440. | 2.4 | 11 |
| 114 | Evaluation of Three Supervised Classifiers in Mapping â€œDepth to Late-Summer Frozen Ground,â€•Central Yukon Territory. Canadian Journal of Remote Sensing, 1996, 22, 163-174. | 2.4 | 28 |
| 115 | An approach to the estimation of surface net radiation in mountain areas using remote sensing and digital terrain data. Theoretical and Applied Climatology, 1995, 52, 55-68. | 2.8 | 31 |
| 116 | Incorporating topographic and climatic GIS data into satellite image analysis of an alpine tundra ecosystem, front range, Colorado rocky mountains. Geocarto International, 1995, 10, 43-60. | 3.5 | 3 |
| 117 | Remote Sensing of the Radiation Balance during the Growing Season at the Niwot Ridge Long-Term Ecological Research Site, Front Range, Colorado, U.S.A.. Arctic and Alpine Research, 1994, 26, 393. | 1.3 | 5 |
| 118 | Radiation Modeling in Mountainous Terrain Review and Status. Mountain Research and Development, 1993, 13, 339. | 1.0 | 63 |
| 119 | Modelling the radiation budget of alpine snowfields with remotely sensed data: model formulation and validation. Annals of Glaciology, 1993, 17, 288-294. | 1.4 | 1 |
| 120 | Modelling the radiation budget of alpine snowfields with remotely sensed data: model formulation and validation. Annals of Glaciology, 1993, 17, 288-294. | 1.4 | 16 |
| 121 | Mapping Surface Albedo in the East Slope of the Colorado Front Range, U.S.A., with Landsat Thematic Mapper. Arctic and Alpine Research, 1991, 23, 213. | 1.3 | 17 |
| 122 | A software package for integrating digital elevation models into the digital analysis of remote-sensing data. Computers and Geosciences, 1989, 15, 669-678. | 4.2 | 10 |
| 123 | Enhancement-classification and spectral mixture analysis of caribou lichen habitats, northern Quebec, Canada. , 0, , . | | 1 |
| 124 | Remote Sensing of Surface Water and Soil Moisture. Geophysical Monograph Series, 0, , 119-142. | 0.1 | 6 |