

Alain Royer

List of Publications by Year in descending order

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Version: 2024-02-01

64
papers

1,945
citations

279798

23
h-index

265206

42
g-index

65
all docs

65
docs citations

65
times ranked

1652
citing authors

| # | ARTICLE | IF | CITATIONS |
|----|---|------|-----------|
| 1 | Modelling the passive microwave signature from land surfaces: A review of recent results and application to the L-band SMOS & SMAP soil moisture retrieval algorithms. Remote Sensing of Environment, 2017, 192, 238-262. | 11.0 | 323 |
| 2 | Retrieving landscape freeze/thaw state from Soil Moisture Active Passive (SMAP) radar and radiometer measurements. Remote Sensing of Environment, 2017, 194, 48-62. | 11.0 | 113 |
| 3 | Simulation of the microwave emission of multi-layered snowpacks using the Dense Media Radiative transfer theory: the DMRT-ML model. Geoscientific Model Development, 2013, 6, 1061-1078. | 3.6 | 108 |
| 4 | Evaluation of Spaceborne L-Band Radiometer Measurements for Terrestrial Freeze/Thaw Retrievals in Canada. IEEE Journal of Selected Topics in Applied Earth Observations and Remote Sensing, 2015, 8, 4442-4459. | 4.9 | 67 |
| 5 | Snow water equivalent retrieval in a Canadian boreal environment from microwave measurements using the HUT snow emission model. IEEE Transactions on Geoscience and Remote Sensing, 2004, 42, 1850-1859. | 6.3 | 60 |
| 6 | Improvement of springtime streamflow simulations in a boreal environment by incorporating snow-covered area derived from remote sensing data. Journal of Hydrology, 2010, 390, 35-44. | 5.4 | 60 |
| 7 | Validation of GlobSnow-2 snow water equivalent over Eastern Canada. Remote Sensing of Environment, 2017, 194, 264-277. | 11.0 | 58 |
| 8 | Brightness Temperature Simulations of the Canadian Seasonal Snowpack Driven by Measurements of the Snow Specific Surface Area. IEEE Transactions on Geoscience and Remote Sensing, 2013, 51, 4692-4704. | 6.3 | 55 |
| 9 | Snow Microwave Emission Modeling of Ice Lenses Within a Snowpack Using the Microwave Emission Model for Layered Snowpacks. IEEE Transactions on Geoscience and Remote Sensing, 2013, 51, 4705-4717. | 6.3 | 54 |
| 10 | Land surface temperature retrieval over circumpolar Arctic using SSM/I and MODIS data. Remote Sensing of Environment, 2015, 162, 1-10. | 11.0 | 51 |
| 11 | Response of L-Band brightness temperatures to freeze/thaw and snow dynamics in a prairie environment from ground-based radiometer measurements. Remote Sensing of Environment, 2017, 191, 67-80. | 11.0 | 50 |
| 12 | A simple parameterization for a boreal forest radiative transfer model at microwave frequencies. Remote Sensing of Environment, 2012, 124, 371-383. | 11.0 | 49 |
| 13 | Detection of rain-on-snow (ROS) events and ice layer formation using passive microwave radiometry: A context for Peary caribou habitat in the Canadian Arctic. Remote Sensing of Environment, 2017, 189, 84-95. | 11.0 | 49 |
| 14 | New shortwave infrared albedo measurements for snow specific surface area retrieval. Journal of Glaciology, 2012, 58, 941-952. | 2.2 | 47 |
| 15 | Surface temperature spatial and temporal variations in North America from homogenized satellite SMMR and SSM/I microwave measurements and reanalysis for 1979-2008. Journal of Geophysical Research, 2010, 115, . | 3.3 | 44 |
| 16 | Comparison of commonly-used microwave radiative transfer models for snow remote sensing. Remote Sensing of Environment, 2017, 190, 247-259. | 11.0 | 43 |
| 17 | Evaluation of multi-frequency bare soil microwave reflectivity models. Remote Sensing of Environment, 2015, 162, 186-195. | 11.0 | 41 |
| 18 | Influence of meter-scale wind-formed features on the variability of the microwave brightness temperature around Dome C in Antarctica. Cryosphere, 2014, 8, 1105-1119. | 3.9 | 39 |

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|----|--|------|-----------|
| 19 | Remote sensing of aerosols over North American land surfaces from POLDER and MODIS measurements. <i>Atmospheric Environment</i> , 2004, 38, 3501-3515. | 4.1 | 33 |
| 20 | On the relationship between snow grain morphology and in-situ near infrared calibrated reflectance photographs. <i>Cold Regions Science and Technology</i> , 2010, 61, 34-42. | 3.5 | 33 |
| 21 | Boreal Forest Transmissivity in the Microwave Domain Using Ground-Based Measurements. <i>IEEE Geoscience and Remote Sensing Letters</i> , 2005, 2, 169-171. | 3.1 | 28 |
| 22 | Wetland seasonal dynamics and interannual variability over northern high latitudes, derived from microwave satellite data. <i>Journal of Geophysical Research</i> , 2005, 110, . | 3.3 | 28 |
| 23 | Development of a rain-snow detection algorithm using passive microwave radiometry. <i>Hydrological Processes</i> , 2016, 30, 3184-3196. | 2.6 | 27 |
| 24 | Inversion of a passive microwave snow emission model for water equivalent estimation using airborne and satellite data. <i>Remote Sensing of Environment</i> , 2007, 111, 346-356. | 11.0 | 24 |
| 25 | Assimilation of passive microwave AMSR-2 satellite observations in a snowpack evolution model over northeastern Canada. <i>Hydrology and Earth System Sciences</i> , 2018, 22, 5711-5734. | 4.9 | 24 |
| 26 | Analysis of snow-vegetation interactions in the low Arctic-Subarctic transition zone (northeastern) Tj ETQq0 0 0 rgBT/Overlogg 10 Tf 50 | 1.4 | 23 |
| 27 | Effect of snow microstructure variability on Ku-band radar snow water equivalent retrievals. <i>Cryosphere</i> , 2019, 13, 3045-3059. | 3.9 | 23 |
| 28 | Simulation and Assimilation of Passive Microwave Data Using a Snowpack Model Coupled to a Calibrated Radiative Transfer Model Over Northeastern Canada. <i>Water Resources Research</i> , 2018, 54, 4823-4848. | 4.2 | 20 |
| 29 | Analysis of simulated and spaceborne passive microwave brightness temperatures using in situ measurements of snow and vegetation properties. <i>Canadian Journal of Remote Sensing</i> , 2010, 36, S135-S148. | 2.4 | 19 |
| 30 | New northern snowpack classification linked to vegetation cover on a latitudinal mega-transect across northeastern Canada. <i>Ecoscience</i> , 2021, 28, 225-242. | 1.4 | 19 |
| 31 | Microwave snow emission modeling uncertainties in boreal and subarctic environments. <i>Cryosphere</i> , 2016, 10, 623-638. | 3.9 | 18 |
| 32 | AMSR-E data inversion for soil temperature estimation under snow cover. <i>Remote Sensing of Environment</i> , 2010, 114, 2951-2961. | 11.0 | 17 |
| 33 | Snow specific surface area simulation using the one-layer snow model in the Canadian LAnd Surface Scheme (CLASS). <i>Cryosphere</i> , 2013, 7, 961-975. | 3.9 | 17 |
| 34 | Modeling the Microwave Emission of Bubbly Ice: Applications to Blue Ice and Superimposed Ice in the Antarctic and Arctic. <i>IEEE Transactions on Geoscience and Remote Sensing</i> , 2014, 52, 6639-6651. | 6.3 | 17 |
| 35 | Arctic and subarctic snow microstructure analysis for microwave brightness temperature simulations. <i>Remote Sensing of Environment</i> , 2020, 242, 111754. | 11.0 | 17 |
| 36 | L-Band response to freeze/thaw in a boreal forest stand from ground- and tower-based radiometer observations. <i>Remote Sensing of Environment</i> , 2020, 237, 111542. | 11.0 | 16 |

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|----|--|------|-----------|
| 37 | Low Cost and Compact FMCW 24 GHz Radar Applications for Snowpack and Ice Thickness Measurements. <i>Sensors</i> , 2020, 20, 3909. | 3.8 | 16 |
| 38 | Daily Microwave-Derived Surface Temperature over Canada/Alaska. <i>Journal of Applied Meteorology and Climatology</i> , 2007, 46, 591-604. | 1.5 | 15 |
| 39 | Simulation hydrologique des derniers jours de la crue de printemps: le problème de la neige manquante. <i>Hydrological Sciences Journal</i> , 2010, 55, 872-882. | 2.6 | 13 |
| 40 | Spatial Variability of L-Band Brightness Temperature during Freeze/Thaw Events over a Prairie Environment. <i>Remote Sensing</i> , 2017, 9, 894. | 4.0 | 13 |
| 41 | Improved Simulation of Arctic Circumpolar Land Area Snow Properties and Soil Temperatures. <i>Frontiers in Earth Science</i> , 2021, 9, . | 1.8 | 13 |
| 42 | Evaluation of the snow cover variation in the Canadian Regional Climate Model over eastern Canada using passive microwave satellite data. <i>Hydrological Processes</i> , 2004, 18, 1127-1138. | 2.6 | 12 |
| 43 | In-situ passive microwave emission model parameterization of sub-arctic frozen organic soils. <i>Remote Sensing of Environment</i> , 2018, 205, 112-118. | 11.0 | 12 |
| 44 | Meteorological inventory of rain-on-snow events in the Canadian Arctic Archipelago and satellite detection assessment using passive microwave data. <i>Physical Geography</i> , 2018, 39, 428-444. | 1.4 | 11 |
| 45 | Snow-Covered Soil Temperature Retrieval in Canadian Arctic Permafrost Areas, Using a Land Surface Scheme Informed with Satellite Remote Sensing Data. <i>Remote Sensing</i> , 2018, 10, 1703. | 4.0 | 10 |
| 46 | Soil dielectric characterization during freeze-thaw transitions using L-band coaxial and soil moisture probes. <i>Hydrology and Earth System Sciences</i> , 2021, 25, 1117-1131. | 4.9 | 10 |
| 47 | Timing and spatial variability of fall soil freezing in boreal forest and its effect on SMAP L-band radiometer measurements. <i>Remote Sensing of Environment</i> , 2019, 231, 111230. | 11.0 | 9 |
| 48 | A Merging Algorithm for Regional Snow Mapping over Eastern Canada from AVHRR and SSM/I Data. <i>Remote Sensing</i> , 2013, 5, 5463-5487. | 4.0 | 8 |
| 49 | Modelling the L-Band Snow-Covered Surface Emission in a Winter Canadian Prairie Environment. <i>Remote Sensing</i> , 2018, 10, 1451. | 4.0 | 8 |
| 50 | Presenting Snow Grain Size and Shape Distributions in Northern Canada Using a New Photographic Device Allowing 2D and 3D Representation of Snow Grains. <i>Frontiers in Earth Science</i> , 2020, 7, . | 1.8 | 8 |
| 51 | Review article: Performance assessment of radiation-based field sensors for monitoring the water equivalent of snow cover (SWE). <i>Cryosphere</i> , 2021, 15, 5079-5098. | 3.9 | 8 |
| 52 | Assessment of the Barren Ground Caribou Die-off During Winter 2015-2016 Using Passive Microwave Observations. <i>Geophysical Research Letters</i> , 2018, 45, 4908-4916. | 4.0 | 7 |
| 53 | Improvement of microwave emissivity parameterization of frozen Arctic soils using roughness measurements derived from photogrammetry. <i>International Journal of Digital Earth</i> , 2020, , 1-17. | 3.9 | 7 |
| 54 | Characterizing tundra snow sub-pixel variability to improve brightness temperature estimation in satellite SWE retrievals. <i>Cryosphere</i> , 2022, 16, 87-101. | 3.9 | 7 |

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|----|---|-----|-----------|
| 55 | The Microwave Snow Grain Size: A New Concept to Predict Satellite Observations Over Snow-Covered Regions. <i>AGU Advances</i> , 2022, 3, . | 5.4 | 7 |
| 56 | Microwave brightness temperature as an indicator of near-surface air temperature over snow in Canadian northern regions. <i>International Journal of Remote Sensing</i> , 2012, 33, 1126-1138. | 2.9 | 6 |
| 57 | Radio-frequency interference mitigating hyperspectral L-band radiometer. <i>Geoscientific Instrumentation, Methods and Data Systems</i> , 2017, 6, 39-51. | 1.6 | 6 |
| 58 | Aerosol optical depth spatio-temporal characterization over the Canadian BOREAS domain. <i>International Journal of Remote Sensing</i> , 2004, 25, 2903-2917. | 2.9 | 5 |
| 59 | Creation of a Lambertian Microwave Surface for Retrieving the Downwelling Contribution in Ground-Based Radiometric Measurements. <i>IEEE Geoscience and Remote Sensing Letters</i> , 2015, 12, 462-466. | 3.1 | 5 |
| 60 | High-resolution snow depth prediction using Random Forest algorithm with topographic parameters: A case study in the Greiner watershed, Nunavut. <i>Hydrological Processes</i> , 2022, 36, . | 2.6 | 4 |
| 61 | Snow Mapping over Eastern Canada for Climate Change Studies Purpose using Historical NOAAVHRR and SSM/I Data. , 2006, , . | | 3 |
| 62 | Retrieving dry snow stratigraphy using a versatile low-cost frequency modulated continuous wave (FMCW) K-band radar. <i>Physical Geography</i> , 2022, 43, 308-332. | 1.4 | 3 |
| 63 | Potential of X-band polarimetric synthetic aperture radar co-polar phase difference for arctic snow depth estimation. <i>Cryosphere</i> , 2022, 16, 2163-2181. | 3.9 | 2 |
| 64 | Snowex 2017 In-Situ Passive Microwave Measurements: Analysis of WET Snow Microwave Emission. , 2018, , . | | 0 |