# Lionel Jarlan

List of Publications by Year
in descending order

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| 106 | 4,185 | 94433 37 | 128289 60 |
|---|---|---|---|
| papers | citations | h-index | g-index |

| 126 | 126 | 126 | 4330 |
|---|---|---|---|
| all docs | docs citations | times ranked | citing authors |

| # | Article | IF | Citations |
|---|---|---|---|
| 1 | Challenges for drought assessment in the Mediterranean region under future climate scenarios. Earth-Science Reviews, 2020, 210, 103348. | 9.1 | 224 |
| 2 | The AMMA Land Surface Model Intercomparison Project (ALMIP). Bulletin of the American Meteorological Society, 2009, 90, 1865-1880. | 3.3 | 165 |
| 3 | From Near-Surface to Root-Zone Soil Moisture Using Different Assimilation Techniques. Journal of Hydrometeorology, 2007, 8, 194-206. | 1.9 | 156 |
| 4 | The AMMA-CATCH Gourma observatory site in Mali: Relating climatic variations to changes in vegetation, surface hydrology, fluxes and natural resources. Journal of Hydrology, 2009, 375, 14-33. | 5.4 | 140 |
| 5 | A snow cover climatology for the Pyrenees from MODIS snow products. Hydrology and Earth System Sciences, 2015, 19, 2337-2351. | 4.9 | 120 |
| 6 | Ability of the land surface model ISBA-A-gs to simulate leaf area index at the global scale: Comparison with satellites products. Journal of Geophysical Research, 2006, 111, . | 3.3 | 113 |
| 7 | Natural land carbon dioxide exchanges in the ECMWF integrated forecasting system: Implementation and offline validation. Journal of Geophysical Research D: Atmospheres, 2013, 118, 5923-5946. | 3.3 | 113 |
| 8 | Evaluation of TRMM 3B42 V7 Rainfall Product over the Oum Er Rbia Watershed in Morocco. Climate, 2017, 5, 1. | 2.8 | 112 |
| 9 | Performance assessment of AquaCrop model for estimating evapotranspiration, soil water content and grain yield of winter wheat in Tensift Al Haouz (Morocco): Application to irrigation management. Agricultural Water Management, 2016, 163, 219-235. | 5.6 | 109 |
| 10 | Impact of a satellite-derived leaf area index monthly climatology in a global numerical weather prediction model. International Journal of Remote Sensing, 2013, 34, 3520-3542. | 2.9 | 108 |
| 11 | Assessment of reference evapotranspiration methods in semi-arid regions: Can weather forecast data be used as alternate of ground meteorological parameters?. Journal of Arid Environments, 2010, 74, 1587-1596. | 2.4 | 96 |
| 12 | Assessment of daily MODIS snow cover products to monitor snow cover dynamics over the Moroccan Atlas mountain range. Remote Sensing of Environment, 2015, 160, 72-86. | 11.0 | 95 |
| 13 | Joint assimilation of surface soil moisture and LAI observations into a land surface model. Agricultural and Forest Meteorology, 2008, 148, 1362-1373. | 4.8 | 88 |
| 14 | Climate change impacts on surface water resources in the Rheraya catchment (High Atlas, Morocco). Hydrological Sciences Journal, 2017, 62, 979-995. | 2.6 | 88 |
| 15 | Intercomparison of four remote-sensing-based energy balance methods to retrieve surface evapotranspiration and water stress of irrigated fields in semi-arid climate. Hydrology and Earth System Sciences, 2014, 18, 1165-1188. | 4.9 | 84 |
| 16 | Analysis of leaf area index in the ECMWF land surface model and impact on latent heat and carbon fluxes: Application to West Africa. Journal of Geophysical Research, 2008, 113, . | 3.3 | 80 |
| 17 | Assimilation of SPOT/VEGETATION NDVI data into a sahelian vegetation dynamics model. Remote Sensing of Environment, 2008, 112, 1381-1394. | 11.0 | 76 |
| 18 | A Review of Irrigation Information Retrievals from Space and Their Utility for Users. Remote Sensing, 2021, 13, 4112. | 4.0 | 76 |

| # | Article | IF | Citations |
|---|---|---|---|
| 19 | Remote Sensing of Water Resources in Semi-Arid Mediterranean Areas: the joint international laboratory TREMA. International Journal of Remote Sensing, 2015, 36, 4879-4917. | 2.9 | 74 |
| 20 | The interactions between soilâ€“biosphereâ€“atmosphere land surface model with a multi-energy balance (ISBA-MEB) option in SURFEXv8 â€“ Part 1: Model description. Geoscientific Model Development, 2017, 10, 843-872. | 3.6 | 70 |
| 21 | Performance Metrics for Soil Moisture Downscaling Methods: Application to DISPATCH Data in Central Morocco. Remote Sensing, 2015, 7, 3783-3807. | 4.0 | 69 |
| 22 | Evaluation of Backscattering Models and Support Vector Machine for the Retrieval of Bare Soil Moisture from Sentinel-1 Data. Remote Sensing, 2020, 12, 72. | 4.0 | 69 |
| 23 | An image-based four-source surface energy balance model to estimate crop evapotranspiration from solar reflectance/thermal emission data (SEB-4S). Agricultural and Forest Meteorology, 2014, 184, 188-203. | 4.8 | 68 |
| 24 | Assessing the impact of global climate changes on irrigated wheat yields and water requirements in a semi-arid environment of Morocco. Scientific Reports, 2019, 9, 19142. | 3.3 | 67 |
| 25 | Combined use of optical and radar satellite data for the monitoring of irrigation and soil moisture of wheat crops. Hydrology and Earth System Sciences, 2011, 15, 1117-1129. | 4.9 | 66 |
| 26 | Combining stable isotopes, Eddy Covariance system and meteorological measurements for partitioning evapotranspiration, of winter wheat, into soil evaporation and plant transpiration in a semi-arid region. Agricultural Water Management, 2016, 177, 181-192. | 5.6 | 65 |
| 27 | Normalizing land surface temperature data for elevation and illumination effects in mountainous areas: A case study using ASTER data over a steep-sided valley in Morocco. Remote Sensing of Environment, 2017, 189, 25-39. | 11.0 | 64 |
| 28 | Characterization of the Interannual and Intraseasonal Variability of West African Vegetation between 1982 and 2002 by Means of NOAA AVHRR NDVI Data. Journal of Climate, 2007, 20, 1202-1218. | 3.2 | 62 |
| 29 | An Integrated DSS for Groundwater Management Based on Remote Sensing. The Case of a Semi-arid Aquifer in Morocco. Water Resources Management, 2012, 26, 3209-3230. | 3.9 | 53 |
| 30 | The SPARSE model for the prediction of water stress and evapotranspiration components from thermal infra-red data and its evaluation over irrigated and rainfed wheat. Hydrology and Earth System Sciences, 2015, 19, 4653-4672. | 4.9 | 52 |
| 31 | Monitoring of wheat crops using the backscattering coefficient and the interferometric coherence derived from Sentinel-1 in semi-arid areas. Remote Sensing of Environment, 2020, 251, 112050. | 11.0 | 52 |
| 32 | Future Scenarios of Surface Water Resources Availability in North African Dams. Water Resources Management, 2018, 32, 1291-1306. | 3.9 | 51 |
| 33 | Impact of Sowing Date on Yield and Water Use Efficiency of Wheat Analyzed through Spatial Modeling and FORMOSAT-2 Images. Remote Sensing, 2015, 7, 5951-5979. | 4.0 | 50 |
| 34 | Analysis of ERS wind scatterometer time series over Sahel (Mali). Remote Sensing of Environment, 2002, 81, 404-415. | 11.0 | 48 |
| 35 | Assessment of Equity and Adequacy of Water Delivery in Irrigation Systems Using Remote Sensing-Based Indicators in Semi-Arid Region, Morocco. Water Resources Management, 2013, 27, 4697-4714. | 3.9 | 45 |
| 36 | Modelling LAI at a regional scale with ISBA-A-gs: comparison with satellite-derived LAI over southwestern France. Biogeosciences, 2009, 6, 1389-1404. | 3.3 | 43 |

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|---|---|---|---|
| 37 | Calibrating an evapotranspiration model using radiometric surface temperature, vegetation cover fraction and near-surface soil moisture data. Agricultural and Forest Meteorology, 2018, 256-257, 104-115. | 4.8 | 42 |
| 38 | Potentiality of optical and radar satellite data at high spatio-temporal resolutions for the monitoring of irrigated wheat crops in Morocco. International Journal of Applied Earth Observation and Geoinformation, 2010, 12, S32-S37. | 2.8 | 40 |
| 39 | Performance of the two-source energy budget (TSEB) model for the monitoring of evapotranspiration over irrigated annual crops in North Africa. Agricultural Water Management, 2017, 193, 71-88. | 5.6 | 39 |
| 40 | Cereal Yield Forecasting with Satellite Drought-Based Indices, Weather Data and Regional Climate Indices Using Machine Learning in Morocco. Remote Sensing, 2021, 13, 3101. | 4.0 | 39 |
| 41 | Testing a sahelian grassland functioning model against herbage mass measurements. Ecological Modelling, 2006, 193, 437-446. | 2.5 | 37 |
| 42 | Long-term analysis of snow-covered area in the Moroccan High-Atlas through remote sensing. International Journal of Applied Earth Observation and Geoinformation, 2010, 12, S109-S115. | 2.8 | 37 |
| 43 | A new irrigation priority index based on remote sensing data for assessing the networks irrigation scheduling. Agricultural Water Management, 2013, 119, 1-9. | 5.6 | 36 |
| 44 | Water use efficiency and yield of winter wheat under different irrigation regimes in a semi-arid region. Agricultural Sciences, 2011, 02, 273-282. | 0.3 | 35 |
| 45 | Potential for the Detection of Irrigation Events on Maize Plots Using Sentinel-1 Soil Moisture Products. Remote Sensing, 2020, 12, 1621. | 4.0 | 34 |
| 46 | Analysis of the linkages between rainfall and land surface conditions in the West African monsoon through CMAP, ERS-WSC, and NOAA-AVHRR data. Journal of Geophysical Research, 2005, 110, . | 3.3 | 33 |
| 47 | Dominant patterns of AVHRR NDVI interannual variability over the Sahel and linkages with key climate signals (1982-2003). Geophysical Research Letters, 2005, 32, n/a-n/a. | 4.0 | 30 |
| 48 | Polynomial search and global modeling: Two algorithms for modeling chaos. Physical Review E, 2012, 86, 046205. | 2.1 | 30 |
| 49 | Irrigation scheduling of a classical gravity network based on the Covariance Matrix Adaptation â€“ Evolutionary Strategy algorithm. Computers and Electronics in Agriculture, 2014, 102, 64-72. | 7.7 | 29 |
| 50 | Evolutionary bi-objective optimization of a semi-arid vegetation dynamics model with NDVI and Ïƒ0 satellite data. Remote Sensing of Environment, 2008, 112, 1365-1380. | 11.0 | 28 |
| 51 | Spatio-temporal variability of NDVIâ€“precipitation over southernmost South America: possible linkages between climate signals and epidemics. Environmental Research Letters, 2008, 3, 044008. | 5.2 | 27 |
| 52 | The SudMed Program and the Joint International Laboratory TREMA: A Decade of Water Transfer Study in the Soil-plant-atmosphere System over Irrigated Crops in Semi-arid Area. Procedia Environmental Sciences, 2013, 19, 524-533. | 1.4 | 27 |
| 53 | A Life-Size and Near Real-Time Test of Irrigation Scheduling with a Sentinel-2 Like Time Series (SPOT4-Take5) in Morocco. Remote Sensing, 2014, 6, 11182-11203. | 4.0 | 27 |
| 54 | Linkages between Rainfed Cereal Production and Agricultural Drought through Remote Sensing Indices and a Land Data Assimilation System: A Case Study in Morocco. Remote Sensing, 2020, 12, 4018. | 4.0 | 27 |

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| 55 | Spatiotemporal characterization of current and future droughts in the High Atlas basins (Morocco). Theoretical and Applied Climatology, 2019, 135, 593-605. | 2.8 | 26 |
| 56 | Variations of the Snow Water Equivalent in the Ourika Catchment (Morocco) over 2000â€“2018 Using Downscaled MERRA-2 Data. Water (Switzerland), 2018, 10, 1120. | 2.7 | 25 |
| 57 | Linkages between common wheat yields and climate in Morocco (1982â€“2008). International Journal of Biometeorology, 2014, 58, 1489-502. | 3.0 | 23 |
| 58 | Spaceborne altimetry and scatterometry backscattering signatures at C- and Ku-bands over West Africa. Remote Sensing of Environment, 2015, 159, 117-133. | 11.0 | 23 |
| 59 | Toward a Surface Soil Moisture Product at High Spatiotemporal Resolution: Temporally Interpolated, Spatially Disaggregated SMOS Data. Journal of Hydrometeorology, 2018, 19, 183-200. | 1.9 | 22 |
| 60 | Land surface parameter monitoring with ERS scatterometer data over the Sahel: A comparison between agro-pastoral and pastoral areas. Remote Sensing of Environment, 2005, 96, 438-452. | 11.0 | 21 |
| 61 | The interactions between soilâ€“biosphereâ€“atmosphere (ISBA) land surface model multi-energy balance (MEB) option in SURFEXv8 â€“ Part 2: Introduction of a litter formulation and model evaluation for local-scale forest sites. Geoscientific Model Development, 2017, 10, 1621-1644. | 3.6 | 19 |
| 62 | Mapping of Sahelian vegetation parameters from ERS scatterometer data with an evolution strategies algorithm. Remote Sensing of Environment, 2003, 87, 72-84. | 11.0 | 18 |
| 63 | Disaggregation of SMOS Soil Moisture to 100 m Resolution Using MODIS Optical/Thermal and Sentinel-1 Radar Data: Evaluation over a Bare Soil Site in Morocco. Remote Sensing, 2017, 9, 1155. | 4.0 | 17 |
| 64 | Projection of irrigation water demand based on the simulation of synthetic crop coefficients and climate change. Hydrology and Earth System Sciences, 2021, 25, 637-651. | 4.9 | 16 |
| 65 | Linkages between snow cover, temperature and rainfall and the North Atlantic Oscillation over Morocco. Climate Research, 2016, 69, 229-238. | 1.1 | 15 |
| 66 | Retrieval of land surface parameters in the Sahel from ERS wind scatterometer data: a "brute force" method. IEEE Transactions on Geoscience and Remote Sensing, 2002, 40, 2056-2062. | 6.3 | 14 |
| 67 | Using coarse remote sensing radar observations to control the trajectory of a simple Sahelian land surface model. Remote Sensing of Environment, 2005, 94, 269-285. | 11.0 | 13 |
| 68 | Spatioâ€temporal variability of vegetation cover over Morocco (1982â€“2008): linkages with large scale climate and predictability. International Journal of Climatology, 2014, 34, 1245-1261. | 3.5 | 12 |
| 69 | Irrigation Amounts and Timing Retrieval through Data Assimilation of Surface Soil Moisture into the FAO-56 Approach in the South Mediterranean Region. Remote Sensing, 2021, 13, 2667. | 4.0 | 12 |
| 70 | Irrigation Mapping on Two Contrasted Climatic Contexts Using Sentinel-1 and Sentinel-2 Data. Water (Switzerland), 2022, 14, 804. | 2.7 | 12 |
| 71 | Comparison of ERS wind-scatterometer and SSM/I data for Sahelian vegetation monitoring. IEEE Transactions on Geoscience and Remote Sensing, 2000, 38, 1794-1803. | 6.3 | 11 |
| 72 | EVALUATION OF THE SAP FLOW MEASUREMENTS DETERMINED WITH HEAT BALANCE METHOD FOR CITRUS ORCHARDS IN SEMI-ARID REGION. Acta Horticulturae, 2012, , 259-267. | 0.2 | 11 |

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| 73 | Evapotranspiration partition using the multiple energy balance version of the ISBA-A-g<sub>s</sub> land surface model over two irrigated crops in a semi-arid Mediterranean region (Marrakech, Morocco). Hydrology and Earth System Sciences, 2020, 24, 3789-3814. | 4.9 | 10 |
| 74 | Western European climate, and Pinot noir grape harvest dates in Burgundy, France, since the 17thÂcentury. Climate Research, 2011, 46, 243-253. | 1.1 | 9 |
| 75 | Ability of a soilâ€“vegetationâ€“atmosphere transfer model and a two-source energy balance model to predict evapotranspiration for several crops and climate conditions. Hydrology and Earth System Sciences, 2019, 23, 5033-5058. | 4.9 | 8 |
| 76 | Integrating thermal stress indexes within Shuttleworthâ€“Wallace model for evapotranspiration mapping over a complex surface. Irrigation Science, 2021, 39, 45-61. | 2.8 | 8 |
| 77 | C-band radar data and in situ measurements for the monitoring of wheat crops in a semi-arid area (center of Morocco). Earth System Science Data, 2021, 13, 3707-3731. | 9.9 | 8 |
| 78 | Surface energy balance and flux partitioning of annual crops in southwestern France. Agricultural and Forest Meteorology, 2021, 308-309, 108529. | 4.8 | 8 |
| 79 | Combining a Two Source Energy Balance Model Driven by MODIS and MSG-SEVIRI Products with an Aggregation Approach to Estimate Turbulent Fluxes over Sparse and Heterogeneous Vegetation in Sahel Region (Niger). Remote Sensing, 2018, 10, 974. | 4.0 | 7 |
| 80 | Evaluation of Groundwater Quality and Agricultural use Under a Semiâ€arid Environment: Case of Agafay, Western Haouz, Morocco. Irrigation and Drainage, 2019, 68, 778-796. | 1.7 | 7 |
| 81 | Snow hydrology in the Moroccan Atlas Mountains. Journal of Hydrology: Regional Studies, 2022, 42, 101101. | 2.4 | 7 |
| 82 | Characterization of Evapotranspiration over Irrigated Crops in a Semi-arid Area (Marrakech,) Tj ETQq0 0 0 rgBT /Overlock 10 Tf 50 382 T | 1.4 | 6 |
| 83 | Multi-Scale Evaluation of the TSEB Model over a Complex Agricultural Landscape in Morocco. Remote Sensing, 2020, 12, 1181. | 4.0 | 6 |
| 84 | An Agent based Modeling for the Gravity Irrigation Management. Procedia Environmental Sciences, 2013, 19, 804-813. | 1.4 | 5 |
| 85 | Evaluation and Aggregation Properties of Thermal Infra-Red-Based Evapotranspiration Algorithms from 100 m to the km Scale over a Semi-Arid Irrigated Agricultural Area. Remote Sensing, 2017, 9, 1178. | 4.0 | 5 |
| 86 | Evapotranspiration in the Mediterranean region. , 2020, , 23-49. | | 5 |
| 87 | Present and Future High-Resolution Climate Forcings over Semiarid Catchments: Case of the Tensift (Morocco). Atmosphere, 2021, 12, 370. | 2.3 | 5 |
| 88 | Using Satellite Scatterometers to Monitor Continental Surfaces. , 2016, , 79-113. | | 4 |
| 89 | Soil moisture estimation in Ferlo region (Senegal) using radar (ENVISAT/ASAR) and optical (SPOT/VEGETATION) data. Egyptian Journal of Remote Sensing and Space Science, 2018, 21, S13-S22. | 2.0 | 4 |
| 90 | Sub-chapter 2.3.2. Water resources in South Mediterranean catchments. , 2016, , 303-309. | | 4 |

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| 91 | Tropical Atlantic moisture availability and precipitation over West Africa: Application to DEMETER hindcasts. Geophysical Research Letters, 2006, 33, . | 4.0 | 3 |
| 92 | Drought Assessment using Micro-Wave Timeseries of Precipitation and Soil Moisture Over the Mena Region. , 2020, , . | | 3 |
| 93 | Water Stress Detection Over Irrigated Wheat Crops in Semi-Arid Areas using the Diurnal Differences of Sentinel-1 Backscatter. , 2020, , . | | 3 |
| 94 | Evapotranspiration estimates in a traditional irrigated area in semi-arid Mediterranean. Comparison of four remote sensing-based models. Agricultural Water Management, 2022, 270, 107728. | 5.6 | 3 |
| 95 | Data Assimilation for the Monitoring of Continental Surfaces. , 2014, , 283-319. | | 2 |
| 96 | C band radar crops monitoring at high temporal frequency: first results of the MOCTAR campaign. , 2020, , . | | 2 |
| 97 | Surface Soil Moisture Retrieval Over Irrigated Wheat Crops in Semi-Arid Areas using Sentinel-1 Data. , 2020, , . | | 2 |
| 98 | Hydrological Functioning of Maize Crops in Southwest France Using Eddy Covariance Measurements and a Land Surface Model. Water (Switzerland), 2021, 13, 1481. | 2.7 | 2 |
| 99 | Assessment of Soil Quality for a Semi-Arid Irrigated Under Citrus Orchard : Case of the Haouz Plain, Morocco. European Scientific Journal, 2017, 13, 367. | 0.1 | 2 |
| 100 | Data assimilation of surface soil moisture, temperature, and evapotranspiration estimates in a SVAT model over irrigated areas in semi-arid regions: whatâ€™s best to constraint evapotranspiration predictions?. , 2013, , . | | 1 |
| 101 | A Calibration/Disaggregation Coupling Scheme for Retrieving Soil Moisture at High Spatio-Temporal Resolution: Synergy between SMAP Passive Microwave, MODIS/Landsat Optical/Thermal and Sentinel-1 Radar Data. Sensors, 2021, 21, 7406. | 3.8 | 1 |
| 102 | <title>Retrieving land surface parameters over Sahel from ERS wind scatterometer data</title>. , 2001, 4171, 137. | | 0 |
| 103 | Integrated modelling of the water cycle in semi arid watersheds based on ground and satellite data: the SudMed project. Proceedings of SPIE, 2010, , . | 0.8 | 0 |
| 104 | Temporal Decorrelation At C- And L-Band Over Olive Tree Plantations:First Insights From The Marocscat Campaigns. , 2020, , . | | 0 |
| 105 | Irrigation Water Retrieval Through Data Assimilation of Surface Soil Moisture into the FAO-56 Approach in the South Mediterranean Region. , 2021, , . | | 0 |
| 106 | Irrigation Mapping Using Sentinel-1 and Sentinel-2 Data. , 2022, , . | | 0 |