

Laurent Kergoat

List of Publications by Year in descending order

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Version: 2024-02-01

69
papers

4,848
citations

94433

37
h-index

98798

67
g-index

80
all docs

80
docs citations

80
times ranked

5627
citing authors

| # | ARTICLE | IF | CITATIONS |
|----|---|------|-----------|
| 1 | Global-Scale Assessment of Vegetation Phenology Using NOAA/AVHRR Satellite Measurements. <i>Journal of Climate</i> , 1997, 10, 1154-1170. | 3.2 | 317 |
| 2 | Comparing global models of terrestrial net primary productivity (NPP): analysis of differences in light absorption and light-use efficiency. <i>Global Change Biology</i> , 1999, 5, 56-64. | 9.5 | 304 |
| 3 | Determination of phenological dates in boreal regions using normalized difference water index. <i>Remote Sensing of Environment</i> , 2005, 97, 26-38. | 11.0 | 297 |
| 4 | Re-greening Sahel: 30years of remote sensing data and field observations (Mali, Niger). <i>Remote Sensing of Environment</i> , 2014, 140, 350-364. | 11.0 | 253 |
| 5 | Remote sensing of spring phenology in boreal regions: A free of snow-effect method using NOAA-AVHRR and SPOT-VGT data (1982-2004). <i>Remote Sensing of Environment</i> , 2006, 101, 52-62. | 11.0 | 231 |
| 6 | AMMA-CATCH studies in the Sahelian region of West-Africa: An overview. <i>Journal of Hydrology</i> , 2009, 375, 3-13. | 5.4 | 212 |
| 7 | An unexpectedly large count of trees in the West African Sahara and Sahel. <i>Nature</i> , 2020, 587, 78-82. | 27.8 | 212 |
| 8 | Large-scale overview of the summer monsoon over West Africa during the AMMA field experiment in 2006. <i>Annales Geophysicae</i> , 2008, 26, 2569-2595. | 1.6 | 181 |
| 9 | The AMMA Land Surface Model Intercomparison Project (ALMIP). <i>Bulletin of the American Meteorological Society</i> , 2009, 90, 1865-1880. | 3.3 | 165 |
| 10 | The AMMA-CATCH Gourma observatory site in Mali: Relating climatic variations to changes in vegetation, surface hydrology, fluxes and natural resources. <i>Journal of Hydrology</i> , 2009, 375, 14-33. | 5.4 | 140 |
| 11 | Evaluation of MODIS gross primary productivity for Africa using eddy covariance data. <i>Remote Sensing of Environment</i> , 2013, 131, 275-286. | 11.0 | 125 |
| 12 | Seasonal variations of leaf area index of agricultural fields retrieved from Landsat data. <i>Remote Sensing of Environment</i> , 2008, 112, 810-824. | 11.0 | 119 |
| 13 | Spring phenology in boreal Eurasia over a nearly century time scale. <i>Global Change Biology</i> , 2008, 14, 603-614. | 9.5 | 113 |
| 14 | Precipitation as driver of carbon fluxes in 11 African ecosystems. <i>Biogeosciences</i> , 2009, 6, 1027-1041. | 3.3 | 106 |
| 15 | Actual evapotranspiration in drylands derived from in-situ and satellite data: Assessing biophysical constraints. <i>Remote Sensing of Environment</i> , 2013, 131, 103-118. | 11.0 | 104 |
| 16 | Multi-scale soil moisture measurements at the Gourma meso-scale site in Mali. <i>Journal of Hydrology</i> , 2009, 375, 241-252. | 5.4 | 98 |
| 17 | Reduction of tree cover in West African woodlands and promotion in semi-arid farmlands. <i>Nature Geoscience</i> , 2018, 11, 328-333. | 12.9 | 94 |
| 18 | Assessing woody vegetation trends in Sahelian drylands using MODIS based seasonal metrics. <i>Remote Sensing of Environment</i> , 2016, 183, 215-225. | 11.0 | 87 |

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|----|--|------|-----------|
| 19 | Rainfall regime across the Sahel band in the Gourma region, Mali. <i>Journal of Hydrology</i> , 2009, 375, 128-142. | 5.4 | 85 |
| 20 | Less rain, more water in ponds: a remote sensing study of the dynamics of surface waters from 1950 to present in pastoral Sahel (Gourma region, Mali). <i>Hydrology and Earth System Sciences</i> , 2010, 14, 309-324. | 4.9 | 81 |
| 21 | Rain-Use-Efficiency: What it Tells us about the Conflicting Sahel Greening and Sahelian Paradox. <i>Remote Sensing</i> , 2014, 6, 3446-3474. | 4.0 | 81 |
| 22 | Response of surface energy balance to water regime and vegetation development in a Sahelian landscape. <i>Journal of Hydrology</i> , 2009, 375, 178-189. | 5.4 | 76 |
| 23 | Land water storage variability over West Africa estimated by Gravity Recovery and Climate Experiment (GRACE) and land surface models. <i>Water Resources Research</i> , 2011, 47, . | 4.2 | 76 |
| 24 | Monitoring dry vegetation masses in semi-arid areas with MODIS SWIR bands. <i>Remote Sensing of Environment</i> , 2014, 153, 40-49. | 11.0 | 70 |
| 25 | Evolution of Surface Hydrology in the Sahelo-Sudanian Strip: An Updated Review. <i>Water (Switzerland)</i> , 2018, 10, 748. | 2.7 | 70 |
| 26 | Surface thermodynamics and radiative budget in the Sahelian Gourma: Seasonal and diurnal cycles. <i>Journal of Hydrology</i> , 2009, 375, 161-177. | 5.4 | 68 |
| 27 | Nitrogen controls plant canopy light-use efficiency in temperate and boreal ecosystems. <i>Journal of Geophysical Research</i> , 2008, 113, . | 3.3 | 64 |
| 28 | Comparing land surface phenology with leafing and flowering observations from the PlantWatch citizen network. <i>Remote Sensing of Environment</i> , 2015, 160, 273-280. | 11.0 | 57 |
| 29 | Can we use surface wind fields from meteorological reanalyses for Sahelian dust emission simulations?. <i>Geophysical Research Letters</i> , 2015, 42, 2490-2499. | 4.0 | 56 |
| 30 | Analysis of the in situ and MODIS albedo variability at multiple timescales in the Sahel. <i>Journal of Geophysical Research</i> , 2008, 113, . | 3.3 | 49 |
| 31 | AMMA-CATCH, a Critical Zone Observatory in West Africa Monitoring a Region in Transition. <i>Vadose Zone Journal</i> , 2018, 17, 1-24. | 2.2 | 49 |
| 32 | Changes in rainfall distribution promote woody foliage production in the Sahel. <i>Communications Biology</i> , 2019, 2, 133. | 4.4 | 49 |
| 33 | The paradoxical evolution of runoff in the pastoral Sahel: analysis of the hydrological changes over the Agoufou watershed (Mali) using the KINEROS-2 model. <i>Hydrology and Earth System Sciences</i> , 2017, 21, 4591-4613. | 4.9 | 45 |
| 34 | MUREX: a land-surface field experiment to study the annual cycle of the energy and water budgets. <i>Annales Geophysicae</i> , 1999, 17, 838-854. | 1.6 | 41 |
| 35 | Changes in lakes water volume and runoff over ungauged Sahelian watersheds. <i>Journal of Hydrology</i> , 2016, 540, 1176-1188. | 5.4 | 41 |
| 36 | The Niger River Niamey flood of 2012: The paroxysm of the Sahelian paradox?. <i>SÃ©cheresse</i> , 2013, 24, 3-13. | 0.1 | 39 |

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|----|---|-----|-----------|
| 37 | Surface response to rain events throughout the West African monsoon. <i>Atmospheric Chemistry and Physics</i> , 2014, 14, 3883-3898. | 4.9 | 39 |
| 38 | Monitoring water turbidity and surface suspended sediment concentration of the Bagre Reservoir (Burkina Faso) using MODIS and field reflectance data. <i>International Journal of Applied Earth Observation and Geoinformation</i> , 2016, 52, 243-251. | 2.8 | 39 |
| 39 | The use of CO ₂ flux measurements in models of the global terrestrial carbon budget. <i>Global Change Biology</i> , 1996, 2, 287-296. | 9.5 | 38 |
| 40 | Coupling satellite data with vegetation functional models: Review of different approaches and perspectives suggested by the assimilation strategy. <i>International Journal of Remote Sensing</i> , 1997, 15, 283-303. | 1.0 | 34 |
| 41 | Coupled estimation of surface heat fluxes and vegetation dynamics from remotely sensed land surface temperature and fraction of photosynthetically active radiation. <i>Water Resources Research</i> , 2014, 50, 8420-8440. | 4.2 | 28 |
| 42 | Impact of Agropastoral Management on Wind Erosion in Sahelian Croplands. <i>Land Degradation and Development</i> , 2018, 29, 800-811. | 3.9 | 28 |
| 43 | Modeling wind erosion flux and its seasonality from a cultivated sahelian surface: A case study in Niger. <i>Catena</i> , 2014, 122, 61-71. | 5.0 | 27 |
| 44 | Spatiotemporal variability in carbon exchange fluxes across the Sahel. <i>Agricultural and Forest Meteorology</i> , 2016, 226-227, 108-118. | 4.8 | 27 |
| 45 | Observations of the Nocturnal Boundary Layer Associated with the West African Monsoon. <i>Monthly Weather Review</i> , 2010, 138, 3142-3156. | 1.4 | 24 |
| 46 | Contrasted land-surface processes along the West African rainfall gradient. <i>Atmospheric Science Letters</i> , 2011, 12, 31-37. | 1.9 | 23 |
| 47 | Modeling vegetation and wind erosion from a millet field and from a rangeland: Two Sahelian case studies. <i>Aeolian Research</i> , 2015, 19, 97-111. | 2.7 | 22 |
| 48 | Dry-season vegetation mass and cover fraction from SWIR1.6 and SWIR2.1 band ratio: Ground-radiometer and MODIS data in the Sahel. <i>International Journal of Applied Earth Observation and Geoinformation</i> , 2015, 39, 56-64. | 2.8 | 21 |
| 49 | Analysis of Suspended Particulate Matter and Its Drivers in Sahelian Ponds and Lakes by Remote Sensing (Landsat and MODIS): Gourma Region, Mali. <i>Remote Sensing</i> , 2017, 9, 1272. | 4.0 | 21 |
| 50 | Modelling the effect of soil moisture and organic matter degradation on biogenic NO emissions from soils in Sahel rangeland (Mali). <i>Biogeosciences</i> , 2015, 12, 3253-3272. | 3.3 | 19 |
| 51 | Potential of SWOT for Monitoring Water Volumes in Sahelian Ponds and Lakes. <i>IEEE Journal of Selected Topics in Applied Earth Observations and Remote Sensing</i> , 2019, 12, 2541-2549. | 4.9 | 19 |
| 52 | Influence of dry-season vegetation variability on Sahelian dust during 2002-2015. <i>Geophysical Research Letters</i> , 2017, 44, 5231-5239. | 4.0 | 18 |
| 53 | The Surface Energy Budget Computed at the Grid-scale of a Climate Model Challenged by Station Data in West Africa. <i>Journal of Advances in Modeling Earth Systems</i> , 2017, 9, 2710-2738. | 3.8 | 18 |
| 54 | Modelling spatial and temporal dynamics of gross primary production in the Sahel from earth-observation-based photosynthetic capacity and quantum efficiency. <i>Biogeosciences</i> , 2017, 14, 1333-1348. | 3.3 | 16 |

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|----|---|-----|-----------|
| 55 | Modeling Surface Runoff and Water Fluxes over Contrasted Soils in the Pastoral Sahel: Evaluation of the ALMIP2 Land Surface Models over the Gourma Region in Mali. <i>Journal of Hydrometeorology</i> , 2017, 18, 1847-1866. | 1.9 | 15 |
| 56 | A 60-year reconstructed high-resolution local meteorological data set in Central Sahel (1950–2009): evaluation, analysis and application to land surface modelling. <i>International Journal of Climatology</i> , 2017, 37, 2699-2718. | 3.5 | 15 |
| 57 | Calibration of a coupled canopy functioning and SVAT model in the ReSeDA experiment. Towards the assimilation of SPOT/HRV observations into the model. <i>Agronomy for Sustainable Development</i> , 2002, 22, 681-686. | 0.8 | 13 |
| 58 | Remote sensing of the land surface during the African Monsoon Multidisciplinary Analysis (AMMA). <i>Atmospheric Science Letters</i> , 2011, 12, 129-134. | 1.9 | 12 |
| 59 | Drought-induced regime shift and resilience of a Sahelian ecohydrosystem. <i>Environmental Research Letters</i> , 2019, 14, 105005. | 5.2 | 12 |
| 60 | Contrasting responses of woody and herbaceous vegetation to altered rainfall characteristics in the Sahel. <i>Biogeosciences</i> , 2021, 18, 77-93. | 3.3 | 11 |
| 61 | Changes in Sahelian annual vegetation growth and phenology since 1960: A modeling approach. <i>Global and Planetary Change</i> , 2016, 143, 162-174. | 3.5 | 10 |
| 62 | Environmental determinants of <i>E. coli</i> , link with the diarrheal diseases, and indication of vulnerability criteria in tropical West Africa (Kapore, Burkina Faso). <i>PLoS Neglected Tropical Diseases</i> , 2021, 15, e0009634. | 3.0 | 7 |
| 63 | Modelling the growth of floodplain grasslands to explore the impact of changing hydrological conditions on vegetation productivity. <i>Ecological Modelling</i> , 2018, 387, 220-237. | 2.5 | 6 |
| 64 | Revisiting historical climatic signals to better explore the future: prospects of water cycle changes in Central Sahel. <i>Proceedings of the International Association of Hydrological Sciences</i> , 0, 371, 195-201. | 1.0 | 6 |
| 65 | Wind erosion response to past and future agro-pastoral trajectories in the Sahel (Niger). <i>Landscape Ecology</i> , 2022, 37, 529-550. | 4.2 | 3 |
| 66 | Woody plant decline in the Sahel of western Niger (1996–2017): is it driven by climate or land use changes?. <i>Journal of Arid Environments</i> , 2022, 200, 104719. | 2.4 | 3 |
| 67 | Influence of Floods and Growth Duration on the Productivity of Wet Grasslands of <i>Echinochloa stagnina</i> (Retz) P. Beauv. in an East African Floodplain. <i>Wetlands</i> , 2019, 39, 935-944. | 1.5 | 2 |
| 68 | Potential of SWOT for Monitoring Water Volumes in Sahelian Ponds and Lakes. , 2018, , . | | 1 |
| 69 | Spatio-temporal dynamics of suspended particulate matter in the middle Niger River using in-situ and satellite radiometric measurements. <i>Journal of Hydrology: Regional Studies</i> , 2022, 41, 101106. | 2.4 | 1 |