

Jean-Philippe Gastellu-Etchegorry

List of Publications by Year in descending order

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119
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101543

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120
all docs

120
docs citations

120
times ranked

3811
citing authors

#	ARTICLE	IF	CITATIONS
1	Radiative Transfer Image Simulation Using L-System Modeled Strawberry Canopies. Remote Sensing, 2022, 14, 548.	4.0	3
2	Landsat Snow-Free Surface Albedo Estimation Over Sloping Terrain: Algorithm Development and Evaluation. IEEE Transactions on Geoscience and Remote Sensing, 2022, 60, 1-14.	6.3	3
3	Comprehensive LiDAR simulation with efficient physically-based DART-Lux model (I): Theory, novelty, and consistency validation. Remote Sensing of Environment, 2022, 272, 112952.	11.0	11
4	DART-Lux: An unbiased and rapid Monte Carlo radiative transfer method for simulating remote sensing images. Remote Sensing of Environment, 2022, 274, 112973.	11.0	22
5	Implications of 3D Forest Stand Reconstruction Methods for Radiative Transfer Modeling: A Case Study in the Temperate Deciduous Forest. Journal of Geophysical Research D: Atmospheres, 2022, 127, .	3.3	2
6	A general framework of kernel-driven modeling in the thermal infrared domain. Remote Sensing of Environment, 2021, 252, 112157.	11.0	24
7	Modelling of three-dimensional, diurnal light extinction in two contrasting forests. Agricultural and Forest Meteorology, 2021, 296, 108230.	4.8	18
8	Dynamic Retrieval of Olive Tree Properties Using Bayesian Model and Sentinel-2 Images. IEEE Journal of Selected Topics in Applied Earth Observations and Remote Sensing, 2021, 14, 9267-9286.	4.9	10
9	Using the Negative Soil Adjustment Factor of Soil Adjusted Vegetation Index (SAVI) to Resist Saturation Effects and Estimate Leaf Area Index (LAI) in Dense Vegetation Areas. Sensors, 2021, 21, 2115.	3.8	28
10	Impact of Tree Crown Transmittance on Surface Reflectance Retrieval in the Shade for High Spatial Resolution Imaging Spectroscopy: A Simulation Analysis Based on Tree Modeling Scenarios. Remote Sensing, 2021, 13, 931.	4.0	3
11	Modeling Mean Radiant Temperature Distribution in Urban Landscapes Using DART. Remote Sensing, 2021, 13, 1443.	4.0	8
12	Accurate and fast simulation of remote sensing images at top of atmosphere with DART-Lux. Remote Sensing of Environment, 2021, 256, 112311.	11.0	18
13	Modeling the angular effect of MODIS LST in urban areas: A case study of Toulouse, France. Remote Sensing of Environment, 2021, 257, 112361.	11.0	27
14	Impact of Modeling Abstractions When Estimating Leaf Mass per Area and Equivalent Water Thickness over Sparse Forests Using a Hybrid Method. Remote Sensing, 2021, 13, 3235.	4.0	3
15	Discrete anisotropic radiative transfer modelling of solar-induced chlorophyll fluorescence: Structural impacts in geometrically explicit vegetation canopies. Remote Sensing of Environment, 2021, 263, 112564.	11.0	22
16	Assessing impacts of canopy 3D structure on chlorophyll fluorescence radiance and radiative budget of deciduous forest stands using DART. Remote Sensing of Environment, 2021, 265, 112673.	11.0	21
17	How does leaf functional diversity affect the light environment in forest canopies? An in-silico biodiversity experiment. Ecological Modelling, 2021, 440, 109394.	2.5	4
18	Quantitative Analysis of DART Calibration Accuracy for Retrieving Spectral Signatures Over Urban Area. IEEE Journal of Selected Topics in Applied Earth Observations and Remote Sensing, 2021, 14, 10057-10068.	4.9	5

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19	Assessment of Sky Diffuse Irradiance and Building Reflected Irradiance in Cast Shadows. , 2021, , .		0
20	Retrieval of olive tree biophysical properties from Sentinel-2 time series based on physical modelling and machine learning technique. International Journal of Remote Sensing, 2021, 42, 8542-8571.	2.9	7
21	Deep Learning Application to Surface Properties Retrieval Using TIR Measurements: A Fast Forward/Reverse Scheme to Deal with Big Data Analysis from New Satellite Generations. Remote Sensing, 2021, 13, 5003.	4.0	0
22	Modeling Small-Footprint Airborne Lidar-Derived Estimates of Gap Probability and Leaf Area Index. Remote Sensing, 2020, 12, 4.	4.0	22
23	Atmospheric and emissivity corrections for ground-based thermography using 3D radiative transfer modelling. Remote Sensing of Environment, 2020, 237, 111524.	11.0	18
24	DART: Improvement of thermal infrared radiative transfer modelling for simulating top of atmosphere radiance. Remote Sensing of Environment, 2020, 251, 112082.	11.0	10
25	An assessment study of three indirect methods for estimating leaf area density and leaf area index of individual trees. Agricultural and Forest Meteorology, 2020, 292-293, 108101.	4.8	33
26	DART radiative transfer modelling for sloping landscapes. Remote Sensing of Environment, 2020, 247, 111902.	11.0	14
27	Simulation-Based Evaluation of the Estimation Methods of Far-Red Solar-Induced Chlorophyll Fluorescence Escape Probability in Discontinuous Forest Canopies. Remote Sensing, 2020, 12, 3962.	4.0	6
28	Assessment of Workflow Feature Selection on Forest LAI Prediction with Sentinel-2A MSI, Landsat 7 ETM+ and Landsat 8 OLI. Remote Sensing, 2020, 12, 915.	4.0	41
29	Potentials and Limits of Vegetation Indices With BRDF Signatures for Soil-Noise Resistance and Estimation of Leaf Area Index. IEEE Transactions on Geoscience and Remote Sensing, 2020, 58, 5092-5108.	6.3	12
30	Downscaling of solar-induced chlorophyll fluorescence from canopy level to photosystem level using a random forest model. Remote Sensing of Environment, 2019, 231, 110772.	11.0	109
31	Quantifying Vegetation Biophysical Variables from Imaging Spectroscopy Data: A Review on Retrieval Methods. Surveys in Geophysics, 2019, 40, 589-629.	4.6	265
32	Remote sensing of solar-induced chlorophyll fluorescence (SIF) in vegetation: 50 years of progress. Remote Sensing of Environment, 2019, 231, 111177.	11.0	372
33	Simulating solar-induced chlorophyll fluorescence in a boreal forest stand reconstructed from terrestrial laser scanning measurements. Remote Sensing of Environment, 2019, 232, 111274.	11.0	37
34	A review of earth surface thermal radiation directionality observing and modeling: Historical development, current status and perspectives. Remote Sensing of Environment, 2019, 232, 111304.	11.0	91
35	Influence of 3D Spruce Tree Representation on Accuracy of Airborne and Satellite Forest Reflectance Simulated in DART. Forests, 2019, 10, 292.	2.1	25
36	Evaluation of Four Kernel-Driven Models in the Thermal Infrared Band. IEEE Transactions on Geoscience and Remote Sensing, 2019, 57, 5456-5475.	6.3	19

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37	Variability and Uncertainty Challenges in Scaling Imaging Spectroscopy Retrievals and Validations from Leaves Up to Vegetation Canopies. <i>Surveys in Geophysics</i> , 2019, 40, 631-656.	4.6	35
38	Mapping the Irradiance Field of a Single Tree: Quantifying Vegetation-Induced Adjacency Effects. <i>IEEE Transactions on Geoscience and Remote Sensing</i> , 2019, 57, 4994-5011.	6.3	11
39	The definition of remotely sensed reflectance quantities suitable for rugged terrain. <i>Remote Sensing of Environment</i> , 2019, 225, 403-415.	11.0	25
40	Simulating Spectral Images with Less Model Through a Voxel-Based Parameterization of Airborne Lidar Data. , 2019, , .		1
41	Hybrid Scene Structuring for Accelerating 3D Radiative Transfer Simulations. <i>Remote Sensing</i> , 2019, 11, 2637.	4.0	4
42	LESS: Large-Scale remote sensing data and image simulation framework over heterogeneous 3D scenes. <i>Remote Sensing of Environment</i> , 2019, 221, 695-706.	11.0	99
43	Estimating leaf mass per area and equivalent water thickness based on leaf optical properties: Potential and limitations of physical modeling and machine learning. <i>Remote Sensing of Environment</i> , 2019, 231, 110959.	11.0	92
44	The stochastic Beer-Lambert-Bouguer law for discontinuous vegetation canopies. <i>Journal of Quantitative Spectroscopy and Radiative Transfer</i> , 2018, 214, 18-32.	2.3	12
45	Retrieving structural and chemical properties of individual tree crowns in a highly diverse tropical forest with 3D radiative transfer modeling and imaging spectroscopy. <i>Remote Sensing of Environment</i> , 2018, 211, 276-291.	11.0	45
46	Olive Biophysical Property Estimation Based on Sentinel-2 Image Inversion. , 2018, , .		3
47	Gaussian Decomposition of LiDAR Waveform Data Simulated by Dart. , 2018, , .		3
48	Monitoring Forest Phenology and Leaf Area Index with the Autonomous, Low-Cost Transmittance Sensor PASTIS-57. <i>Remote Sensing</i> , 2018, 10, 1032.	4.0	17
49	ICARE-VEG: A 3D physics-based atmospheric correction method for tree shadows in urban areas. <i>ISPRS Journal of Photogrammetry and Remote Sensing</i> , 2018, 142, 311-327.	11.1	5
50	Urban energy exchanges monitoring from space. <i>Scientific Reports</i> , 2018, 8, 11498.	3.3	75
51	Characterization of Remote Sensing Albedo Over Sloped Surfaces Based on DART Simulations and In Situ Observations. <i>Journal of Geophysical Research D: Atmospheres</i> , 2018, 123, 8599-8622.	3.3	24
52	Investigating the impact of overlying vegetation canopy structures on fire radiative power (FRP) retrieval through simulation and measurement. <i>Remote Sensing of Environment</i> , 2018, 217, 158-171.	11.0	17
53	Bayesian inversion technique of olive tree biophysical properties using Sentinel-2 images. , 2018, , .		1
54	A novel method to obtain three-dimensional urban surface temperature from ground-based thermography. <i>Remote Sensing of Environment</i> , 2018, 215, 268-283.	11.0	36

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55	Drivers of shortwave radiation fluxes in Arctic tundra across scales. Remote Sensing of Environment, 2017, 193, 86-102.	11.0	31
56	Estimation of 3D vegetation density with Terrestrial Laser Scanning data using voxels. A sensitivity analysis of influencing parameters. Remote Sensing of Environment, 2017, 191, 373-388.	11.0	81
57	DART: Recent Advances in Remote Sensing Data Modeling With Atmosphere, Polarization, and Chlorophyll Fluorescence. IEEE Journal of Selected Topics in Applied Earth Observations and Remote Sensing, 2017, 10, 2640-2649.	4.9	146
58	Toward a general tropical forest biomass prediction model from very high resolution optical satellite images. Remote Sensing of Environment, 2017, 200, 140-153.	11.0	49
59	ANthropogenic heat FLUX estimation from Space. , 2017, , .		4
60	Canopy polarized BRDF simulation based on non-stationary Monte Carlo 3-D vector RT modeling. Journal of Quantitative Spectroscopy and Radiative Transfer, 2017, 189, 149-167.	2.3	18
61	Crop Biophysical Properties Estimation Based on LiDAR Full-Waveform Inversion Using the DART RTM. IEEE Journal of Selected Topics in Applied Earth Observations and Remote Sensing, 2017, 10, 4853-4868.	4.9	11
62	Atmospheric correction of ground-based thermal infrared camera through dart model. , 2017, , .		3
63	Lidar full waveform inversion to estimate maize and wheat crops biophysical properties. , 2017, , .		0
64	Recent advances of modeling lidar data using dart and radiometric calibration coefficient from LVIS waveforms comparison. , 2017, , .		0
65	Simulating the Canopy Reflectance of Different Eucalypt Genotypes With the DART 3-D Model. IEEE Journal of Selected Topics in Applied Earth Observations and Remote Sensing, 2017, 10, 4844-4852.	4.9	5
66	Amazon forest structure generates diurnal and seasonal variability in light utilization. Biogeosciences, 2016, 13, 2195-2206.	3.3	32
67	Mangrove Forest Dynamics Using Very High Spatial Resolution Optical Remote Sensing. , 2016, , 269-295.		2
68	Impact of Demographic Growth on Seawater Intrusion: Case of the Tripoli Aquifer, Lebanon. Water (Switzerland), 2016, 8, 104.	2.7	12
69	Variational multiscale approach to LAI profile inversion based on LiDAR full waveform measurements. , 2016, , .		1
70	Data simulation and fusion of imaging spectrometer and LiDAR multi-sensor system through dart model. , 2016, , .		1
71	Simulation of satellite, airborne and terrestrial LiDAR with DART (I): Waveform simulation with quasi-Monte Carlo ray tracing. Remote Sensing of Environment, 2016, 184, 418-435.	11.0	58
72	Simulation of satellite, airborne and terrestrial LiDAR with DART (II): ALS and TLS multi-pulse acquisitions, photon counting, and solar noise. Remote Sensing of Environment, 2016, 184, 454-468.	11.0	40

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73	A novel approach for anthropogenic heat flux estimation from space. , 2016, , .		6
74	3-D vector radiative transfer for vegetation cover polarized BRDF modeling. , 2016, , .		2
75	Anthropogenic heat flux estimation from space: results of the first phase of the URBANFLUXES project. Proceedings of SPIE, 2016, , .	0.8	0
76	Discrete Anisotropic Radiative Transfer (DART 5) for Modeling Airborne and Satellite Spectroradiometer and LIDAR Acquisitions of Natural and Urban Landscapes. Remote Sensing, 2015, 7, 1667-1701.	4.0	234
77	An LUT-Based Inversion of DART Model to Estimate Forest LAI from Hyperspectral Data. IEEE Journal of Selected Topics in Applied Earth Observations and Remote Sensing, 2015, 8, 3147-3160.	4.9	38
78	Simulating images of passive sensors with finite field of view by coupling 3-D radiative transfer model and sensor perspective projection. Remote Sensing of Environment, 2015, 162, 169-185.	11.0	29
79	The fourth phase of the radiative transfer model intercomparison (RAMI) exercise: Actual canopy scenarios and conformity testing. Remote Sensing of Environment, 2015, 169, 418-437.	11.0	170
80	Exploiting Earth Observation data products for mapping Local Climate Zones. , 2015, , .		10
81	Simulating imaging spectrometer data: 3D forest modeling based on LiDAR and in situ data. Remote Sensing of Environment, 2014, 152, 235-250.	11.0	118
82	Directional Viewing Effects on Satellite Land Surface Temperature Products Over Sparse Vegetation Canopiesâ€”A Multisensor Analysis. IEEE Geoscience and Remote Sensing Letters, 2013, 10, 1464-1468.	3.1	69
83	Building a Forward-Mode Three-Dimensional Reflectance Model for Topographic Normalization of High-Resolution (1â€”5 m) Imagery: Validation Phase in a Forested Environment. IEEE Transactions on Geoscience and Remote Sensing, 2013, 51, 3910-3921.	6.3	12
84	Radiative transfer modeling in the Earthâ€”Atmosphere system with DART model. Remote Sensing of Environment, 2013, 139, 149-170.	11.0	50
85	A new approach of direction discretization and oversampling for 3D anisotropic radiative transfer modeling. Remote Sensing of Environment, 2013, 135, 213-223.	11.0	37
86	Retrieval of spruce leaf chlorophyll content from airborne image data using continuum removal and radiative transfer. Remote Sensing of Environment, 2013, 131, 85-102.	11.0	144
87	Material reflectance retrieval in urban tree shadows with physics-based empirical atmospheric correction. , 2013, , .		2
88	A canopy radiative transfer scheme with explicit FAPAR for the interactive vegetation model ISBAâ€”EgS: Impact on carbon fluxes. Journal of Geophysical Research G: Biogeosciences, 2013, 118, 888-903.	3.0	50
89	The fourth radiation transfer model intercomparison (RAMIâ€”IV): Proficiency testing of canopy reflectance models with ISOâ€”13528. Journal of Geophysical Research D: Atmospheres, 2013, 118, 6869-6890.	3.3	102
90	Investigating the Utility of Wavelet Transforms for Inverting a 3-D Radiative Transfer Model Using Hyperspectral Data to Retrieve Forest LAI. Remote Sensing, 2013, 5, 2639-2659.	4.0	39

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91	Direction discretization for radiative transfer modeling: An introduction to the new direction model of dart. , 2012, , .		0
92	Biomass Prediction in Tropical Forests: The Canopy Grain Approach. , 2012, , .		11
93	Attenuating the Absorption Contribution on C_{n^2} Estimates with a Large-Aperture Scintillometer. Boundary-Layer Meteorology, 2012, 143, 261-283.	2.3	9
94	The variation of apparent crown size and canopy heterogeneity across lowland Amazonian forests. Global Ecology and Biogeography, 2010, 19, 72-84.	5.8	79
95	A model-based performance test for forest classifiers on remote-sensing imagery. Forest Ecology and Management, 2009, 257, 23-37.	3.2	14
96	Discriminating irrigated and rainfed olive orchards with thermal ASTER imagery and DART 3D simulation. Agricultural and Forest Meteorology, 2009, 149, 962-975.	4.8	36
97	Uncertainty analysis of computational methods for deriving sensible heat flux values from scintillometer measurements. Atmospheric Measurement Techniques, 2009, 2, 741-753.	3.1	33
98	3D modeling of satellite spectral images, radiation budget and energy budget of urban landscapes. Meteorology and Atmospheric Physics, 2008, 102, 187-207.	2.0	65
99	The RAMI On-line Model Checker (ROMC): A web-based benchmarking facility for canopy reflectance models. Remote Sensing of Environment, 2008, 112, 1144-1150.	11.0	85
100	Assessing the effects of the clumping phenomenon on BRDF of a maize crop based on 3D numerical scenes using DART model. Agricultural and Forest Meteorology, 2008, 148, 1341-1352.	4.8	46
101	Physically-based retrievals of Norway spruce canopy variables from very high spatial resolution hyperspectral data. , 2007, , .		3
102	An interpolation procedure for generalizing a look-up table inversion method. Remote Sensing of Environment, 2003, 87, 55-71.	11.0	45
103	Essai préliminaire de détection des champs d'ambroisie par télédétection spatiale. Revue Francaise D'allergologie Et D'immunologie Clinique, 2002, 42, 533-538.	0.1	6
104	Recovery of forest canopy characteristics through inversion of a complex 3D model. Remote Sensing of Environment, 2002, 79, 320-328.	11.0	45
105	Radiative transfer model for simulating high-resolution satellite images. IEEE Transactions on Geoscience and Remote Sensing, 2001, 39, 1922-1926.	6.3	20
106	A modeling approach to assess the robustness of spectrometric predictive equations for canopy chemistry. Remote Sensing of Environment, 2001, 76, 1-15.	11.0	42
107	A Modeling Approach for Studying Forest Chlorophyll Content. Remote Sensing of Environment, 2000, 71, 226-238.	11.0	111
108	Modeling of the radiation regime and photosynthesis of a finite canopy using the DART model. Influence of canopy architecture assumptions and border effects. Agronomy for Sustainable Development, 2000, 20, 259-270.	0.8	10

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109	Modeling BRF and Radiation Regime of Boreal and Tropical Forests. Remote Sensing of Environment, 1999, 68, 281-316.	11.0	91
110	Modeling BRF and Radiation Regime of Boreal and Tropical Forest. Remote Sensing of Environment, 1999, 68, 317-340.	11.0	31
111	Sensitivity of Texture of High Resolution Images of Forest to Biophysical and Acquisition Parameters. Remote Sensing of Environment, 1998, 65, 61-85.	11.0	83
112	Tropical dry ecosystems modelling and monitoring from space. Ecological Modelling, 1998, 108, 175-188.	2.5	4
113	A modeling approach of PAR environment in a tropical rain forest in Sumatra: application to remote sensing. Ecological Modelling, 1998, 108, 237-264.	2.5	15
114	Imaging spectrometer based on an acousto-optic tunable filter. Review of Scientific Instruments, 1998, 69, 2859-2867.	1.3	25
115	A simple anisotropic reflectance model for homogeneous multilayer canopies. Remote Sensing of Environment, 1996, 57, 22-38.	11.0	26
116	Modeling radiative transfer in heterogeneous 3-D vegetation canopies. Remote Sensing of Environment, 1996, 58, 131-156.	11.0	373
117	Reflectance, leaf area index and structural studies of a rain forest canopy using the "Operation Canop" association's tree top raft "hot air airship" combination. Geocarto International, 1994, 9, 17-18.	3.5	4
118	Seasonal and interannual variations of the sea surface temperatures (SST) in the Banda and Arafura Sea area. Journal of Sea Research, 1990, 25, 425-429.	1.0	14
119	DESIGNING A GIS FOR THE STUDY OF FOREST EVOLUTION IN CENTRAL JAVA. Tijdschrift Voor Economische En Sociale Geografie, 1988, 79, 93-103.	2.1	8