Xavier Comas

List of Publications by Year
in descending order

47 papers	1,083 citations	361413 20 h-index	454955 30 g-index
47 all docs	47 docs citations	47 times ranked	1008 citing authors

#	Article	IF	Citations
1	Using an object-based machine learning ensemble approach to upscale evapotranspiration measured from eddy covariance towers in a subtropical wetland. Science of the Total Environment, 2022, 831, 154969.	8.0	7
2	Mapping CO2 fluxes of cypress swamp and marshes in the Greater Everglades using eddy covariance measurements and Landsat data. Remote Sensing of Environment, 2021, 262, 112523.	11.0	10
3	A Remote Sensing Technique to Upscale Methane Emission Flux in a Subtropical Peatland. Journal of Geophysical Research G: Biogeosciences, 2020, 125, e2020JG006002.	3.0	6
4	Changes in Physical Properties of Everglades Peat Soils Induced by Increased Salinity at the Laboratory Scale: Implications for Changes in Biogenic Gas Dynamics. Water Resources Research, 2020, 56, e2019WR026144.	4.2	3
5	Evidence for glacial geological controls on the hydrology of Maine (USA) peatlands. Geology, 2020, 48, 771-776.	4.4	3
6	Peat collapse in the southwestern Everglades: Understanding the matrix level response to salinization and its implications for biogenic gas fluxes from peat soils. , 2020, , .		0
7	Exploring the potential of ground-penetrating radar (GPR) to measure the extent of chronic disturbance in peatlands: Examples from acid mine drainage and peat fire. , 2020, , .		0
8	Quantification of Peat Thickness and Stored Carbon at the Landscape Scale in Tropical Peatlands: A Comparison of Airborne Geophysics and an Empirical Topographic Method. Journal of Geophysical Research F: Earth Surface, 2019, 124, 3107-3123.	2.8	23
9	Understanding fracture distribution and its relation to knickpoint evolution in the Rio Icacos watershed (Luquillo Critical Zone Observatory, Puerto Rico) using landscapeâ€scale hydrogeophysics. Earth Surface Processes and Landforms, 2019, 44, 877-885.	2.5	7
10	Methane Ebullition From Subtropical Peat: Testing an Ebullition Model Reveals the Importance of Pore Structure. Geophysical Research Letters, 2018, 45, 6992-6999.	4.0	9
11	A Lumped Bubble Capacitance Model Controlled by Matrix Structure to Describe Layered Biogenic Gas Bubble Storage in Shallow Subtropical Peat. Water Resources Research, 2018, 54, 5487-5503.	4.2	1
12	Estimating belowground carbon stocks in peatlands of the Ecuadorian pÃ¡ramo using groundâ€penetrating radar (GPR). Journal of Geophysical Research G: Biogeosciences, 2017, 122, 370-386.	3.0	22
13	The Effect of Fractures on Weathering of Igneous and Volcaniclastic Sedimentary Rocks in the Puerto Rican Tropical Rain Forest. Procedia Earth and Planetary Science, 2017, 17, 972-975.	0.6	11
14	Spatiotemporal variability in biogenic gas dynamics in a subtropical peat soil at the laboratory scale is revealed using highâ€resolution groundâ€penetrating radar. Journal of Geophysical Research G: Biogeosciences, 2017, 122, 2219-2232.	3.0	7
15	Estimating Belowground Carbon Stocks in Isolated Wetlands of the Northern Everglades Watershed, Central Florida, Using Ground Penetrating Radar and Aerial Imagery. Journal of Geophysical Research G: Biogeosciences, 2017, 122, 2804-2816.	3.0	9
16	Architecture of the deep critical zone in the RÃo Icacos watershed (Luquillo Critical Zone) Tj ETQq0 0 0 rgBT /Overlock 10 Tf 50 147 Td (Processes and Landforms, 2016, 41, 1826-1840.	2.5	34
17	Estimating methane gas production in peat soils of the Florida Everglades using hydrogeophysical methods. Journal of Geophysical Research G: Biogeosciences, 2016, 121, 1190-1202.	3.0	15
18	Free phase gas processes in a northern peatland inferred from autonomous fieldâ€scale resistivity imaging. Water Resources Research, 2016, 52, 2996-3018.	4.2	10

#	Article	IF	Citations
19	Peat. Encyclopedia of Earth Sciences Series, 2016, , 476-480.	0.1	3
20	Investigating carbon stocks and fluxes in subtropical peatlands using ground penetrating radar (GPR). , 2015, , .		0
21	Imaging tropical peatlands in Indonesia using ground-penetrating radar (GPR) and electrical resistivity imaging (ERI): implications for carbon stock estimates and peat soil characterization. Biogeosciences, 2015, 12, 2995-3007.	3.3	62
22	Investigating carbon flux variability in subtropical peat soils of the Everglades using hydrogeophysical methods. Journal of Geophysical Research G: Biogeosciences, 2014, 119, 1506-1519.	3.0	13
23	Integration of electrical resistivity imaging and ground penetrating radar to investigate solution features in the Biscayne Aquifer. Journal of Hydrology, 2014, 515, 129-138.	5.4	18
24	The effect of peat structure on the spatial distribution of biogenic gases within bogs. Hydrological Processes, 2014, 28, 5483-5494.	2.6	29
25	Do peatland microforms move through time? Examining the developmental history of a patterned peatland using groundâ€penetrating radar. Journal of Geophysical Research, 2012, 117, .	3.3	16
26	Heterogeneity of biogenic gas ebullition in subtropical peat soils is revealed using timeâ€lapse cameras. Water Resources Research, 2012, 48, .	4.2	30
27	Geophysical evidence for the lateral distribution of free phase gas at the peat basin scale in a large northern peatland. Journal of Geophysical Research, 2011, 116, .	3.3	21
28	Atmospheric pressure drives changes in the vertical distribution of biogenic free-phase gas in a northern peatland. Journal of Geophysical Research, 2011, 116, .	3.3	35
29	Pool patterning in a northern peatland: Geophysical evidence for the role of postglacial landforms. Journal of Hydrology, 2011, 399, 173-184.	5.4	38
30	Variations in freeâ€phase gases in peat landforms determined by groundâ€penetrating radar. Journal of Geophysical Research, 2010, 115, .	3.3	28
31	The Contribution of Ground Penetrating Radar to Water Resource Research. , 2009, , 203-246.		16
32	Seasonal geophysical monitoring of biogenic gases in a northern peatland: Implications for temporal and spatial variability in free phase gas production rates. Journal of Geophysical Research, 2008, 113, .	3.3	54
33	Ecohydrologically important subsurface structures in peatlands revealed by groundâ€penetrating radar and complex conductivity surveys. Journal of Geophysical Research, 2008, 113, .	3.3	55
34	In situ monitoring of free-phase gas accumulation and release in peatlands using ground penetrating radar (GPR). Geophysical Research Letters, 2007, 34, .	4.0	45
35	Evolution of biogenic gases in peat blocks inferred from noninvasive dielectric permittivity measurements. Water Resources Research, 2007, 43, .	4.2	46
36	Resistivityâ€based monitoring of biogenic gases in peat soils. Water Resources Research, 2007, 43, .	4.2	35

#	Article	IF	Citations
37	Stratigraphic controls on pool formation in a domed bog inferred from ground penetrating radar (GPR). Journal of Hydrology, 2005, 315, 40-51.	5.4	53
38	Spatial variability in biogenic gas accumulations in peat soils is revealed by ground penetrating radar (GPR). Geophysical Research Letters, 2005, 32, .	4.0	53
39	Geophysical and hydrological evaluation of two bog complexes in a northern peatland: Implications for the distribution of biogenic gases at the basin scale. Global Biogeochemical Cycles, 2005, 19, n/a-n/a.	4.9	29
40	Low-frequency electrical properties of peat. Water Resources Research, 2004, 40, .	4.2	64
41	Geophysical evidence for peat basin morphology and stratigraphic controls on vegetation observed in a Northern Peatland. Journal of Hydrology, 2004, 295, 173-184.	5.4	75
42	Understanding Carbon Cycling in Northern Peatlands: Recent Developments and Future Prospects. Geophysical Monograph Series, 0, , 1-3.	0.1	8
43	Methane Accumulation and Release from Deep Peat: Measurements, Conceptual Models, and Biogeochemical Significance. Geophysical Monograph Series, 0, , 145-158.	0.1	7
44	Noninvasive Field-Scale Characterization of Gaseous-Phase Methane Dynamics in Peatlands using the Ground-Penetrating Radar Method. Geophysical Monograph Series, 0, , 159-171.	0.1	8
45	Methane Dynamics in Peat: Importance of Shallow Peats and a Novel Reduced-Complexity Approach for Modeling Ebullition. Geophysical Monograph Series, 0, , 173-185.	0.1	35
46	The Stable Carbon Isotope Composition of Methane Produced and Emitted from Northern Peatlands. Geophysical Monograph Series, 0, , 187-203.	0.1	20
47	Physical Controls on Ebullition Losses of Methane from Peatlands. Geophysical Monograph Series, 0, , 219-228.	0.1	10