Ari Viljanen

List of Publications by Year in descending order

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37 papers	2,426 citations	201575 27 h-index	330025 37 g-index
46 all docs	46 docs citations	46 times ranked	1141 citing authors

#	Article	IF	Citations
1	Ionospheric disturbance magnetic field continuation from the ground to the ionosphere using spherical elementary current systems. Earth, Planets and Space, 1999, 51, 431-440.	0.9	251
2	Geomagnetic storm of 29-31 October 2003: Geomagnetically induced currents and their relation to problems in the Swedish high-voltage power transmission system. Space Weather, 2005, 3, n/a-n/a.	1.3	243
3	Geomagnetically induced currents: Science, engineering, and applications readiness. Space Weather, 2017, 15, 828-856.	1.3	149
4	Time derivative of the horizontal geomagnetic field as an activity indicator. Annales Geophysicae, 2001, 19, 1107-1118.	0.6	147
5	Ionospheric equivalent current distributions determined with the method of spherical elementary current systems. Journal of Geophysical Research, 2003, 108, .	3.3	116
6	Space weather events in July 1982 and October 2003 and the effects of geomagnetically induced currents on Swedish technical systems. Annales Geophysicae, 2009, 27, 1775-1787.	0.6	108
7	Application and validation of the spherical elementary currents systems technique for deriving ionospheric equivalent currents with the North American and Greenland ground magnetometer arrays. Journal of Geophysical Research, 2011, 116, .	3.3	107
8	Fast computation of the geoelectric field using the method of elementary current systems and planar Earth models. Annales Geophysicae, 2004, 22, 101-113.	0.6	95
9	Recordings of geomagnetically induced currents and a nowcasting service of the Finnish natural gas pipeline system. Space Weather, 2006, 4, n/a-n/a.	1.3	92
10	Recordings and occurrence of geomagnetically induced currents in the Finnish natural gas pipeline network. Journal of Applied Geophysics, 2001, 48, 219-231.	0.9	87
11	Characteristics of extreme geoelectric fields and their possible causes: Localized peak enhancements. Geophysical Research Letters, 2015, 42, 6916-6921.	1.5	80
12	The Relation Between Geomagnetic Variations and Their Time Derivatives and Implications for Estimation of Induction Risks. Geophysical Research Letters, 1997, 24, 631-634.	1.5	78
13	Relation between substorm characteristics and rapid temporal variations of the ground magnetic field. Annales Geophysicae, 2006, 24, 725-733.	0.6	76
14	Modelling of space weather effects on pipelines. Journal of Applied Geophysics, 2001, 48, 233-256.	0.9	74
15	At substorm onset, 40% of AL comes from underground. Journal of Geophysical Research, 2001, 106, 13119-13134.	3.3	70
16	The GIC and Geomagnetic Response Over Fennoscandia to the 7â€“8 September 2017 Geomagnetic Storm. Space Weather, 2019, 17, 989-1010.	1.3	65
17	Continental scale modelling of geomagnetically induced currents. Journal of Space Weather and Space Climate, 2012, 2, A17.	1.1	60
18	Regional-scale high-latitude extreme geoelectric fields pertaining to geomagnetically induced currents. Earth, Planets and Space, 2015, 67, .	0.9	60

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19	Estimation of geomagnetically induced current levels from different input data. Space Weather, 2006, 4, n/a-n/a.	1.3	55
20	Auroral Omega Bands are a Significant Cause of Large Geomagnetically Induced Currents. Geophysical Research Letters, 2020, 47, e2019GL086677.	1.5	43
21	One-dimensional upward continuation of the ground magnetic field disturbance using spherical elementary current systems. Earth, Planets and Space, 2003, 55, 613-625.	0.9	42
22	Separation of the geomagnetic variation field on the ground into external and internal parts using the spherical elementary current system method. Earth, Planets and Space, 2003, 55, 117-129.	0.9	38
23	Geomagnetically induced currents in Norway: the northernmost high-voltage power grid in the world. Journal of Space Weather and Space Climate, 2014, 4, A10.	1.1	38
24	On the Regional Variability of dB/dt and Its Significance to GIC. Space Weather, 2020, 18, e2020SW002497.	1.3	35
25	Solar wind driven empirical forecast models of the time derivative of the ground magnetic field. Journal of Space Weather and Space Climate, 2015, 5, A7.	1.1	34
26	Auroral electrojets during deep solar minimum at the end of solar cycle 23. Journal of Geophysical Research, 2011, 116, n/a-n/a.	3.3	29
27	On induction effects at EISCAT and IMAGE magnetometer stations. Geophysical Journal International, 1995, 121, 893-906.	1.0	28
28	One-dimensional spherical elementary current systems and their use for determining ionospheric currents from satellite measurements. Earth, Planets and Space, 2006, 58, 667-678.	0.9	28
29	A model for estimating the relation between the Hall to Pedersen conductance ratio and ground magnetic data derived from CHAMP satellite statistics. Annales Geophysicae, 2007, 25, 721-736.	0.6	21
30	Induced currents due to 3D ground conductivity play a major role in the interpretation of geomagnetic variations. Annales Geophysicae, 2020, 38, 983-998.	0.6	19
31	Quiet-time magnetic variations at high latitude observatories. Earth, Planets and Space, 2004, 56, 47-65.	0.9	13
32	Extreme value analysis of the time derivative of the horizontal magnetic field and computed electric field. Annales Geophysicae, 2016, 34, 485-491.	0.6	13
33	Modeling the Geomagnetic Response to the September 2017 Space Weather Event Over Fennoscandia Using the Space Weather Modeling Framework: Studying the Impacts of Spatial Resolution. Space Weather, 2021, 19, e2020SW002683.	1.3	13
34	Influence of spatial variations of the geoelectric field on geomagnetically induced currents. Journal of Space Weather and Space Climate, 2017, 7, A22.	1.1	12
35	Application of conformal mapping to 2-D conductivity structures with non-uniform primary sources. Geophysical Journal International, 1991, 105, 185-190.	1.0	2
36	Forecasting auroras from regional and global magnetic field measurements. Geoscientific Instrumentation, Methods and Data Systems, 2016, 5, 253-262.	0.6	2

#	Article	IF	Citations
37	Spatio-temporal development of large-scale auroral electrojet currents relative to substorm onsets. Annales Geophysicae, 2022, 40, 107-119.	0.6	1