Kerry Gallagher

List of Publications by Citations

121 papers	7,383 citations	47 h-index	84 g-index
132 ext. papers	8,103 ext. citations	4.4 avg, IF	6.04 L-index

#	Paper	IF	Citations
121	Mantle and Slab Contributions in ARC Magmas. *Annual Review of Earth and Planetary Sciences*, **1993**, 21, 175-204	15.3	649
120	FISSION TRACK ANALYSIS AND ITS APPLICATIONS TO GEOLOGICAL PROBLEMS. *Annual Review of Earth and Planetary Sciences*, **1998**, 26, 519-572	15.3	480
119	Partial melting of mafic (amphibolitic) lower crust by periodic influx of basaltic magma. *Earth and Planetary Science Letters*, **2001**, 193, 483-499	5.3	354
118	Evolving temperature histories from apatite fission-track data. *Earth and Planetary Science Letters*, **1995**, 136, 421-435	5.3	347
117	Dehydration melting and the generation of continental flood basalts. *Nature*, **1992**, 358, 57-59	50.4	308
116	Transdimensional inverse thermal history modeling for quantitative thermochronology. *Journal of Geophysical Research*, **2012**, 117, n/a-n/a		299
115	Transdimensional inversion of receiver functions and surface wave dispersion. *Journal of Geophysical Research*, **2012**, 117, n/a-n/a		208
114	Trans-dimensional inverse problems, model comparison and the evidence. *Geophysical Journal International*, **2006**, 167, 528-542	2.6	204
113	Markov chain Monte Carlo (MCMC) sampling methods to determine optimal models, model resolution and model choice for Earth Science problems. *Marine and Petroleum Geology*, **2009**, 26, 525-535	4.7	178
112	Calc-alkaline magmatism, lithospheric thinning and extension in the Basin and Range. *Journal of Geophysical Research*, **1995**, 100, 10271-10286		178
111	The evolution of western Scandinavian topography: A review of Neogene uplift versus the ICE (isostasy□limate□rosion) hypothesis. *Journal of Geodynamics*, **2009**, 47, 72-95	2.2	144
110	Shaping the Australian crust over the last 300 million years: Insights from fission track thermotectonic imaging and denudation studies of key terranes. *Australian Journal of Earth Sciences*, **2002**, 49, 697-717	1.4	137
109	The denudation history of the onshore continental margin of SE Brazil inferred from apatite fission track data. *Journal of Geophysical Research*, **1994**, 99, 18117-18145		136
108	Genetic algorithms: A powerful tool for large-scale nonlinear optimization problems. *Computers and Geosciences*, **1994**, 20, 1229-1236	4.5	121
107	Basaltic volcanism in the Southern Basin and Range: no role for a mantle plume. *Earth and Planetary Science Letters*, **1993**, 116, 45-62	5.3	117
106	Mantle plumes, flood basalts, and thermal models for melt generation beneath continents: Assessment of a conductive heating model and application to the Paran□*Journal of Geophysical Research*, **1996**, 101, 11503-11518		110
105	Denudation history of the continental margin of western peninsular India since the early Mesozoic □reconciling apatite fission-track data with geomorphology. *Earth and Planetary Science Letters*, **2003**, 215, 187-201	5.3	104

104	The onshore record of passive margin evolution. *Journal of the Geological Society*, **1997**, 154, 451-457	2.7	103
103	Transdimensional inference in the geosciences. *Philosophical Transactions Series A, Mathematical, Physical, and Engineering Sciences*, **2013**, 371, 20110547	3	95
102	Destructive plate margin magmatism: Geochemistry and melt generation. *Lithos*, **1994**, 33, 169-188	2.9	91
101	Denudation and uplift at passive margins: the record on the Atlantic Margin of southern Africa. *Philosophical Transactions Series A, Mathematical, Physical, and Engineering Sciences*, **1999**, 357, 835-859	3	86
100	Paran□magmatism and the opening of the South Atlantic. *Geological Society Special Publication*, **1992**, 68, 221-240	1.7	81
99	Rapid incision of the Mekong River in the middle Miocene linked to monsoonal precipitation. *Nature Geoscience*, **2018**, 11, 944-948	18.3	81
98	Volcanic and nonvolcanic rifted margins of the Red Sea and Gulf of Aden: Crustal cooling and margin evolution in Yemen. *Geochimica Et Cosmochimica Acta*, **1997**, 61, 2511-2527	5.5	79
97	Late Cretaceous reactivation of major crustal shear zones in northern Namibia: constraints from apatite fission track analysis. *Tectonophysics*, **2002**, 349, 75-92	3.1	79
96	Post-rift reactivation of the onshore margin of southeast Brazil: Evidence from apatite (U□h)/He and fission-track data. *Earth and Planetary Science Letters*, **2011**, 309, 118-130	5.3	74
95	Accurate and precise Pb isotope ratio measurements in environmental samples by MC-ICP-MS. *International Journal of Mass Spectrometry*, **2004**, 232, 205-215	1.9	73
94	The chronology and tectonic style of landscape evolution along the elevated Atlantic continental margin of South Africa resolved by joint apatite fission track and (U-Th-Sm)/He thermochronology. *Tectonics*, **2016**, 35, 511-545	4.3	72
93	Post-breakup tectonics in southeast Brazil from thermochronological data and combined inverse-forward thermal history modeling. *Journal of Geophysical Research*, **2012**, 117, n/a-n/a		70
92	Low temperature thermochronology and modeling strategies for multiple samples 1: Vertical profiles. *Earth and Planetary Science Letters*, **2005**, 237, 193-208	5.3	69
91	Inference of abrupt changes in noisy geochemical records using transdimensional changepoint models. *Earth and Planetary Science Letters*, **2011**, 311, 182-194	5.3	65
90	Accelerated denudation and tectonic/geomorphic reactivation of the cratons of northeastern Brazil during the Late Cretaceous. *Journal of Geophysical Research*, **1998**, 103, 27091-27105		64
89	Tectonic controls on magmatism associated with continental break-up: an example from the Paran□tendeka Province. *Earth and Planetary Science Letters*, **2000**, 179, 335-349	5.3	63
88	Denudation, fission track analysis and the long-term evolution of passive margin topography: application to the southeast Brazilian margin. *Journal of South American Earth Sciences*, **1995**, 8, 65-77	2	62
87	A novel geochemical approach to paleorecords of dust deposition and effective humidity: 8500 years of peat accumulation at Store Mosse (the □reat Bog□), Sweden. *Quaternary Science Reviews*, **2013**, 69, 69-82	3.9	59

86	Mantle hotspots, plumes and regional tectonics as causes of intraplate magmatism. *Terra Nova*, **1993**, 5, 552-559	3	59
85	Subsidence, sedimentation and sea-level changes in the Eromanga Basin, Australia. *Basin Research*, **1989**, 2, 115-131	3.2	58
84	Genetic algorithms: An evolution from Monte Carlo Methods for strongly non-linear geophysical optimization problems. *Geophysical Research Letters*, **1991**, 18, 2177-2180	4.9	57
83	Rare earth element and Pb isotope variations in a 52 kyr peat core from Lynch Crater (NE Queensland, Australia): Proxy development and application to paleoclimate in the Southern Hemisphere. *Geochimica Et Cosmochimica Acta*, **2007**, 71, 942-960	5.5	56
82	Lead atmospheric deposition rates and isotopic trends in Asian dust during the last 9.5kyr recorded in an ombrotrophic peat bog on the eastern Qinghai Tibetan Plateau. *Geochimica Et Cosmochimica Acta*, **2012**, 82, 4-22	5.5	55
81	Present and past influence of the Iceland Plume on sedimentation. *Geological Society Special Publication*, **2002**, 196, 13-25	1.7	55
80	Constraints on the vertical motion of eastern Australia during the Mesozoic. *Basin Research*, **1994**, 6, 77-94	3.2	52
79	Intra-parasequence architecture of an interpreted asymmetrical wave-dominated delta. *Sedimentology*, **2010**, 57, 760-785	3.3	51
78	Thermochemical interpretation of 1-D seismic data for the lower mantle: The significance of nonadiabatic thermal gradients and compositional heterogeneity. *Journal of Geophysical Research*, **2009**, 114,		51
77	Passive temperature tomography experiments to characterize transmissivity and connectivity of preferential flow paths in fractured media. *Journal of Hydrology*, **2014**, 512, 549-562	6	50
76	Retro-wedge foreland basin evolution along the ECORS line, eastern Pyrenees, France. *Journal of the Geological Society*, **2016**, 173, 419-437	2.7	48
75	Denudational and thermal history of the Early Cretaceous Brandberg and Okenyenya igneous complexes on Namibia's Atlantic passive margin. *Tectonics*, **2005**, 24, n/a-n/a	4.3	48
74	Fractionation of lithium isotopes in magmatic systems as a natural consequence of cooling. *Earth and Planetary Science Letters*, **2009**, 278, 286-296	5.3	47
73	Bayesian Mixture Modelling in Geochronology via Markov Chain Monte Carlo. *Mathematical Geosciences*, **2006**, 38, 269-300		47
72	A quantitative assessment of the effects of magmatism on the thermal history of the Karoo sedimentary sequence. *Journal of African Earth Sciences*, **1994**, 18, 227-243	2.2	47
71	Mantle plumes, continental magmatism and asymmetry in the South Atlantic. *Earth and Planetary Science Letters*, **1994**, 123, 105-117	5.3	46
70	A self-parametrizing partition model approach to tomographic inverse problems. *Inverse Problems*, **2009**, 25, 055009	2.3	45
69	Sediment supply to the Orange sedimentary system over the last 150My: An evaluation from sedimentation/denudation balance. *Marine and Petroleum Geology*, **2009**, 26, 782-794	4.7	44

68	An examination of some uncertainties associated with estimates of sedimentation rates and tectonic subsidence. *Basin Research*, **1989**, 2, 97-114	3.2	42
67	Real-parameter optimization performance study on the CEC-2005 benchmark with SPC-PNX		41
66	Inference of past climate from borehole temperature data using Bayesian Reversible Jump Markov chain Monte Carlo. *Geophysical Journal International*, **2007**, 171, 1430-1439	2.6	39
65	A Bayesian approach to inverse modelling of stratigraphy, part 1: method. *Basin Research*, **2009**, 21, 5-25	3.2	38
64	Intracontinental deformation in southern Africa during the Late Cretaceous. *Journal of African Earth Sciences*, **2014**, 100, 20-41	2.2	37
63	The Mesozoic denudation history of the Atlantic margins of southern Africa and southeast Brazil and the relationship to offshore sedimentation. *Geological Society Special Publication*, **1999**, 153, 41-53	1.7	36
62	Tectonic setting of the Taubaté Basin (Southeastern Brazil): Insights from regional seismic profiles and outcrop data. *Journal of South American Earth Sciences*, **2013**, 42, 194-204	2	35
61	Helium trapping in apatite damage: Insights from (U-Th-Sm)/He dating of different granitoid lithologies. *Chemical Geology*, **2017**, 470, 116-131	4.2	35
60	A reassessment of the role of ice sheet glaciation in the long-term evolution of the East Greenland fjord region. *Geomorphology*, **2008**, 97, 109-125	4.3	34
59	A preliminary Mesozoic and Cenozoic denudation history of the North East Greenland onshore margin. *Global and Planetary Change*, **2000**, 24, 261-274	4.2	32
58	The ICE hypothesis stands: How the dogma of late Cenozoic tectonic uplift can no longer be sustained in the light of data and physical laws. *Journal of Geodynamics*, **2010**, 50, 102-111	2.2	30
57	Low temperature thermochronology and strategies for multiple samples. *Earth and Planetary Science Letters*, **2006**, 241, 557-570	5.3	30
56	The influence of climate, hydrology and permafrost on Holocene peat accumulation at 3500m on the eastern Qinghai Tibetan Plateau. *Quaternary Science Reviews*, **2009**, 28, 3303-3314	3.9	27
55	A Bayesian approach to calibrating apatite fission track annealing models for laboratory and geological timescales. *Geochimica Et Cosmochimica Acta*, **2006**, 70, 5183-5200	5.5	26
54	Towards a coupled physical and chemical model for tonalite Trondhjemite Granodiorite magma formation. *Lithos*, **2005**, 79, 43-60	2.9	26
53	Upper Cretaceous exhumation of the western Rhodope Metamorphic Province (Chalkidiki Peninsula, northern Greece). *Tectonics*, **2014**, 33, 1113-1132	4.3	25
52	Contrasting Mesozoic evolution across the boundary between on and off craton regions of the South African plateau inferred from apatite fission track and (U-Th-Sm)/He thermochronology. *Journal of Geophysical Research: Solid Earth*, **2017**, 122, 1517-1547	3.6	23
51	Evaluating paleoproxies for peat decomposition and their relationship to peat geochemistry. *Holocene*, **2013**, 23, 1666-1671	2.6	23

50	Low-temperature thermochronology in the Peruvian Central Andes: implications for long-term continental denudation, timing of plateau uplift, canyon incision and lithosphere dynamics. *Journal of the Geological Society*, **2010**, 167, 803-815	2.7	23
49	The resolution of past heat flow in sedimentary basins from non-linear inversion of geochemical data: the smoothest model approach, with synthetic examples. *Geophysical Journal International*, **1992**, 109, 78-95	2.6	22
48	A Bayesian partition modelling approach to resolve spatial variability in climate records from borehole temperature inversion. *Geophysical Journal International*, **2009**, 178, 651-666	2.6	21
47	Evidence for Eocene–Oligocene glaciation in the landscape of the East Greenland margin. *Geology*, **2016**, 44, 895-898	5	20
46	The post-orogenic evolution of the Northeast Greenland Caledonides constrained from apatite fission track analysis and inverse geodynamic modelling. *Tectonophysics*, **2012**, 530-531, 318-330	3.1	20
45	The role of thermal conductivity measurements in modelling thermal histories in sedimentary basins. *Marine and Petroleum Geology*, **1997**, 14, 201-214	4.7	20
44	Effects of slab-window, alkaline volcanism, and glaciation on thermochronometer cooling histories, Patagonian Andes. *Earth and Planetary Science Letters*, **2019**, 511, 164-176	5.3	17
43	Comment on "Thermal history modelling: HeFTy vs. QTQt" by Vermeesch and Tian, Earth-Science Reviews (2014), 139, 279–290. *Earth-Science Reviews*, **2018**, 176, 387-394	10.2	17
42	Thermal Conductivity of Sedimentary and Basement Rocks From the Eromanga and Cooper Basins, South Australia. *Exploration Geophysics*, **1987**, 18, 381-391	1	17
41	Comment on "A reporting protocol for thermochronologic modeling illustrated with data from the Grand Canyon" by Flowers, Farley and Ketcham. *Earth and Planetary Science Letters*, **2016**, 441, 211-212	5.3	17
40	A Bayesian approach to inverse modelling of stratigraphy, part 2: Validation tests. *Basin Research*, **2009**, 21, 27-45	3.2	16
39	Mineral dust as a driver of carbon accumulation in northern latitudes. *Scientific Reports*, **2018**, 8, 6876	4.9	15
38	Reply to comment regarding the ICE-hypothesis. *Journal of Geodynamics*, **2009**, 48, 101-106	2.2	15
37	Beyond kriging: dealing with discontinuous spatial data fields using adaptive prior information and Bayesian partition modelling. *Geological Society Special Publication*, **2004**, 239, 195-209	1.7	15
36	Paleocene initiation of Cenozoic uplift in Norway. *Geological Society Special Publication*, **2002**, 196, 45-65	1.7	15
35	Stochastic thermal history modelling. 1. Constraining heat flow histories and their uncertainty. *Marine and Petroleum Geology*, **2002**, 19, 633-648	4.7	15
34	Exploiting 3D Spatial Sampling in Inverse Modeling of Thermochronological Data. *Reviews in Mineralogy and Geochemistry*, **2005**, 58, 375-387	7.1	13
33	Evidence for post-early Eocene tectonic activity in southeastern Ireland. *Geological Magazine*, **2003**, 140, 101-118	2	11

32	The post-Variscan thermal and denudational history of Ireland. *Geological Society Special Publication*, **2002**, 196, 371-399	1.7	11
31	20. Visualizing Thermotectonic and Denudation Histories Using Apatite Fission Track Thermochronology **2005**, 527-566		10
30	Late Cretaceous to Oligocene burial and collision in western Papua New Guinea: Indications from low-temperature thermochronology and thermal modelling. *Tectonophysics*, **2019**, 752, 81-112	3.1	10
29	Uplift, denudation, and their causes and constraints over geological timescales **2012**, 608-644		8
28	Discussion of Gabrielsen et´al. (2010): Latest Caledonian to Present tectonomorphological development of southern Norway. *Marine and Petroleum Geology*, **2010**, 27, 1285-1289	4.7	8
27	Three-dimensional simulation and inversion of borehole temperatures for reconstructing past climate in complex settings. *Journal of Geophysical Research*, **2009**, 114,		8
26	New SHRIMP zircon ages from tuffs within the British Palaeozoic stratotypes. *Gondwana Research*, **2012**, 21, 719-727	5.1	7
25	Characterizing the significance of provenance on the inference of thermal history models from apatite fission-track data: A synthetic data study **2004**,		7
24	Some Strategies For Wstimating Present Day Heat Flow From Exploration Wells, With Examples. *Exploration Geophysics*, **1990**, 21, 145-159	1	7
23	Transdimensional change-point modeling as a tool to investigate uncertainty in applied geophysical inference: An example using borehole geophysical logs. *Geophysics*, **2013**, 78, WB89-WB99	3.1	6
22	Inverse thermal history modelling as a hydrocarbon exploration tool. *Inverse Problems*, **1998**, 14, 479-497	2.3	6
21	Thermal Conductivity And Heat Flow In The Southern Cooper Basin. *Exploration Geophysics*, **1987**, 18, 62-65	1	6
20	Long-term reactivation and morphotectonic history of the Zambezi Belt, northern Zimbabwe, revealed by multi-method thermochronometry. *Tectonophysics*, **2019**, 750, 117-136	3.1	6
19	Comment on the reply to the Comment on thermal history modelling: HeFTy vs. QTQt by Vermeesch and Tian, Earth-Science Reviews (2014), 139, 279–290. *Earth-Science Reviews*, **2020**, 203, 102878	10.2	6
18	A new approach to thermal history modelling with detrital low temperature thermochronological data. *Earth and Planetary Science Letters*, **2020**, 529, 115872	5.3	6
17	Estimating kinetic parameters for organic reactions from geological data: an example from the Gippsland Basin, Australia. *Applied Geochemistry*, **1991**, 6, 653-664	3.5	4
16	Discussion and Reply: Shaping the Australian crust over the last 300 million years: Insights from fission track thermotectonic imaging and denudation studies of key terranes. *Australian Journal of Earth Sciences*, **2003**, 50, 645-650	1.4	3
15	Moho depth of the British Isles: a probabilistic perspective. *Geophysical Journal International*, **2020**, 221, 1384-1401	2.6	2

14	Reply to: The mountains of North-East Greenland are not remnants of the Caledonian topography. A comment on Pedersen et al. (2012) *Tectonophysics*, **2013**, 589, 239-244	3.1	2
13	A novel approach for constraining heat flow histories in sedimentary basins. *Geological Society Special Publication*, **1998**, 141, 223-239	1.7	2
12	Modelling the effects of ice transport and sediment sources on the form of detrital thermochronological age probability distributions from glacial settings. *Earth Surface Dynamics*, **2020**, 8, 931-953	3.8	2
11	Comment on Discussion: Extracting thermal history from low temperature thermochronology/A comment on the recent exchanges between Vermeesch and Tian and Gallagher and Ketcham by Paul Green and Ian Duddy, Earth Science Reviews, https://doi.org/10.1016/j.earscirev.2020.103197. *Earth-Science Reviews*, **2021**, 216, 103549	10.2	2
10	Estimating uncertainties on net erosion from well-log porosity data. *Basin Research*, **2020**, 32, 51-67	3.2	2
9	Distinguishing tectonic versus climatic forcing on landscape evolution: An example from SE Tibetan Plateau. *Bulletin of the Geological Society of America*, **2021**, 133, 233-242	3.9	2
8	A Bayesian Approach for Thermal History Reconstruction in Basin Modeling. *Journal of Geophysical Research: Solid Earth*, **2020**, 125, e2020JB019384	3.6	1
7	14. Exploiting 3D Spatial Sampling in Inverse Modeling of Thermochronological Data **2005**, 375-388		1
6	From sink to source: Using offshore thermochronometric data to extract onshore erosion signals in Namibia. *Basin Research*, **2021**, 33, 1580-1602	3.2	1
5	The Impact of Lithology on Fjord Morphology. *Geophysical Research Letters*, **2021**, 48, e2021GL093101	4.9	0
4	The Earth's dynamic surface: an overview. *Geological Society Special Publication*, **2008**, 296, 1-5	1.7	
3	Discussion and Reply Shaping the Australian crust over the last 300´million years: insights from fission track thermotectonic imaging and denudation studies of key terranes. *Australian Journal of Earth Sciences*, **2003**, 50, 645-650	1.4	
2	Inverse Theory, Monte Carlo Method. *Encyclopedia of Earth Sciences Series*, **2020**, 1-7	0	
1	Inference from noisy data with an unknown number of discontinuities: ideas from outside the box.. *ASEG Extended Abstracts*, **2010**, 2010, 1-5	0.2	