

## CURRICULUM VITAE

KEVIN CHARLES ANTONY BURKE

### Personal:

Born: November 13, 1929, London, England  
Married, three children  
Naturalized U.S. Citizen, January 1979

### Education:

Goldsmid Scholar of University College, London, 1948 - 1951  
DSIR Research Studentship, University College London, 1951 - 1953  
B.Sc. Special Geology, Upper Second Class, 1951  
Ph.D. University of London, 1953

### Professional Experience:

1953-      Lecturer in Geology, University of Gold Coast, Africa  
1956      Consultant, Geological Survey of Ghana  
            Summers, geologist, Geological Survey of Ireland

1956-      Geologist and Senior Geologist, Atomic Energy Division,  
1960-      Geological Survey of Great Britain

1960-      Secondment to the International Atomic Energy as  
1961      Advisor on Nuclear Raw Materials to the Government of the  
            Republic of Korea

1961-      Senior lecturer and Head, Geology Department, University of  
1965      West Indies, Kingston, Jamaica

1965-      Professor of Geology, University of Ibadan, Nigeria  
1971

1972-      Visiting Professor of Geology, University of Toronto,  
1973      Ontario, Canada

1973-      Professor of Geology and Chairman, Department of Geological  
1982      Sciences, State University of New York at Albany

- 1974- Consultant, Dobex International, Ltd.  
1981
- 1975- Member, COCORP Interpretation Panel  
1975- Associate Editor, Geology  
1982
- 1976 Visiting Professor, California Institute of Technology (February)  
1976- Tectonic Team Leader, Lunar Science Institute, Basaltic  
1981 Volcanism Project  
1977 Hill Family Visiting Professor, University of Minnesota  
(May - June)
- 1978 Panelist National Academy - Continental Drilling Project
- 1979 Visiting Professor, University of Calgary, Canada (March-April)
- 1977 Associate Editor, Journal of Geophysical Research  
1979
- 1979- Associate Editor, EOS (Transactions American Geophysical Union)  
Associate Editor, Tectonophysics
- 1979- Consultant, Exxon Production Research Company
- 1980- Chairman, University Senate, State University of New York at  
1981 Albany
- 1980- Member, Editorial Board Journal of Geology
- 1981- Consultant, Globex International Consulting Associates
- 1982- Professor, State University of New York at Albany
- 1982- Deputy Director Lunar and Planetary Institute
- 1982- American Association of Petroleum Geologists,  
1983 Distinguished Lecturer.

Professional Societies:

Geological Society of America  
 American Geophysical Union  
 Nigerian Mining Geological and Metallurgical Society  
 Geological Society of London  
 Mineralogical Society of London  
 Sigma Xi

Recent Research Funding:

1974 SUNY Awards Committee, \$1,590, Geology of Tibet  
 1976 NSF, \$48,852, Cretaceous Caribbean Plate Boundary  
 1976 NASA/GSFC, \$23,140, Global Tectonic Boundary Mapping  
 1977 NSF, \$6,510, Caribbean Workshop  
 1978 NSF, \$59,000, Caribbean Plate Boundary Problems  
 1978 NASA/GSFC, \$35,000, Global Tectonic Boundary Mapping  
 1979 NASA \$79,000, Neotectonics of the North Anatolian Transform  
 1981 NASA \$34,000, Caribbean Neotectonics  
 1981 LPI \$10,000, Revision of Rifts and Sutures of the World

Some Recent Invited Talks

- 1979 (July) Hawaii Hotspot Conference: Hotspot Distribution on Earth  
 (September) US-Yugoslav Earthquake Conference: elevation of old mountains and subsidence of intra-plate basins  
 (December) AGU, San Francisco: Thermal Evolution of the Earth.
- 1980 (January) - COPSTOC - Cornell  
 (April) North Anatolian Fault Conference, Istanbul, Turkey  
 (April) Yale University, Continental Collision  
 (May) Chinese Academy of Sciences Tibet Conference: Continental Collision. Beijing
- 1981 Topography of Africa, Conference on African Geology, Open University, England, April 1981  
 Early Earth, Lunar and Planetary Science Conference, March 1981  
 Archean Plate Tectonics, American Geophysical Union Annual Meeting, Baltimore, MD., May 1981  
 Evolution of Caribbean Plate, Caribbean Geol. Conf., Santo Domingo, August 1981
- 1982 1) Pan-African Orogeny: Varied Styles. February Conference on Arabia-Egyptian Pan African Correlation, Jeddah King Abdul-Aziz University.  
 2) Rifts in Continental Escape Zones, Conference on Extensional Structures in convergent Environments Veszprem, Hungary, June

3) Varied Rifts, Varied Resources: COPSTOC, Cornell University,  
May.

Publications:

1. 1955 McKie, D., and Burke, L., Geology of the Island of South Connemara: Geol. Mag., v. 92, p. 487-498
2. 1955 McCallien, W. J., and Burke, K., Note on the relative ages of certain Pre-Cambrian Formations in the Gold Coast: Jour. West Afr. Sci. Assoc., v. 1, p. 75
3. 1957 An Outline of the Structure of the Galway granite: Geol. Mag., v. 94, p. 452-464
4. 1957 McCallien, W. J. and Burke, K., Geology of the Coastal Region near Accra: Jour. West Afr. Sci. Assoc., v. 3, p. 79-90
5. 1959 Replacement veins in the Dahomeyan of Ghana: Geol. Mag., v. 96, p. 353-360
6. 1960 Bowie, S.H.U., Bisby, H., Burke, K., and Hales, F., Electronic instruments for detecting and assaying Beryllium ores: Trans. Inst. Min. and Met., v. 69, p. 345-359
7. 1960 Tongjum uranium deposit: Bull. Geol. Surv. Korea, v. 4, p. 152-155
8. 1960 Ore mineral zones related to granite in South Korea: Bull. Geol. Surv. Korea, v. 4, p. 141-151
9. 1961 Nuclear raw material prospecting in Korea: Intern'l Atomic Energy Agency Tech. Assistance Rept. No. 7
10. 1963 Dissolved gases in East African lakes: Nature, v. 198, p. 568-569
11. 1963 Chubb, L. J., and Burke, K., Age of the Jamaican granodiorite: Geol. Mag., v. 100, p. 524-532
12. 1963 Burke, K., and Robinson, E., Age of the gypsum in Jamaica: Caribbean Jour. Sci., v. 4, p. 237-242
13. 1963 Reply to H. Tazieff on Dissolved gases in East African lakes: Nature, v. 200, p. 1308
14. 1963 Age relations of the Connemara migmatites and the Galway granite: Geol. Mag., v. 100, p. 470-471
15. 1964 Metamorphosed dykes in the central inlier of Jamaica: Jour. Geol. soc. Jamaica, v. 6, p. 46-47
16. 1964 Review of mechanisms of hard tissue destruction, ed. R. F. Soggaes: Geol. Mag., v. 101, p. 287
17. 1964 Burke, K., Cunningham, M., Gallagher, M., and Hawkes, J., Beryl in the Rosses granite, N.W. Ireland: Econ. Geol., v. 59, p. 1539-1550.
18. 1965 Burke, K., and Robinson, E., Sedimentary structures in the Wagwater belt, Eastern Jamaica: Jour. Geol. Soc. Jamaica, v. 7, p. 1-10
19. 1966 Goreau, T., and Burke, K., Pleistocene and Holocene geology of the

- Kingston Harbor Shelf, Jamaica: *Marine Geology*, v. 4, p. 207-225
20. 1966 Review of a new geological map of Nigeria: *Jour. Mining and Geol. of the Nig. Min. Geol. and Met. Soc.*, v. 2, p. 32-34
  21. 1967 The Yallahs Basin, a sedimentary basin southeast of Kingston, Jamaica: *Marine Geology*, v. 5, p. 45-60
  22. 1967 Review of mineral resources of Africa. De Kun: *Jour. Mining and Geol. of the Nig. Min. Geol. and Met. Soc.*, v. 2, p. 70
  23. 1968 Drowned dwarf atolls south of Jamaica?: *Bull. Amer. Assoc. Petroleum Geologists*, v. 52, p. 348-350
  24. 1968 Burke, K., Robinson, E., and Coates, A. G., The geology of the Benbow inlier, Jamaica: *Trans. 4th Carib. Geol. Conf., Trinidad 1965*, p. 299-307
  25. 1969 Burke, K., and Freeth, S. J., A rapid method for the determination of size, shape, and sphericity of gravel fragments: *Jour. Sed. Pet.*, v. 39, p. 797-798
  26. 1969 Seismic areas of the Guinea Coast where Atlantic fracture zones reach Africa: *Nature*, v. 222, p. 655-657
  27. 1969 The Akwapim Fault, a recent fault in Ghana: *Jour. of Mining and Geol. of the Nig. Min. Geol. and Met. Soc.*, v. 4, p. 29-38
  28. 1969 Bradshaw, R., Leake, B. E., Burke, K., and Plant, A. G., The Oughterard Granite Co., Galway, Ireland: *Proc. Roy. Irish Academy*, v. 68B, p. 39-65
  29. 1969 Grant, N. K., Rex, D. C., Burke, K., and Freeth, S. J., The geological sequence and geochronology of old basement rocks from Ibadan, Nigeria: *Ann. Fac. Sci. Clermont Ferrand No. 41., Geol. et Min.*, v. 19, p. 84
  30. 1969 The structure of the Guinea Coast: *Jour. Mining and Geol. of the Nig. Min. Geol. and Met. Soc.*, v. 4, p. 115-116
  31. 1969 Burke, K., Durotoye, 'Bisi, Reingold, Judith, and Shaw, Thurstan, Late Pleistocene and Holocene deposits at Odo Ogun: *Jour. Min. and Geol. of the Nig. Min. Geol. and Met. Soc.*, v.4, p. 115
  32. 1969 Burke, K., Freeth, S. J., and Grant, N. K., Granite gneiss of two billion year age from Ibadan, Nigeria: *Jour. Mining and Geol. of the Nig. Min. Geol. and Met. Soc.*, v. 4, p. 117
  33. 1969 Burke, K., and Durotoye, 'Bisi, 'Variation Climatique due Quaternaire au s. o. du Nigeria': *VIIIe INQUA Paria, Resumes*, p. 7
  34. 1970 An Outline of the stratigraphy of the Quaternary superficial deposits of Ibadan, in *Stratigraphy, An Interdisciplinary Symposium: Occas. Publ. 19, Inst. Afr. Studies, U. Ibadan*, p. 45-46.
  35. 1970 Burke, K., and Durotoye, 'Bisi, Boulder slide at Imessi-Ile: *Center for Short Lived Phenomena, Smithsonian Institution, Event Report 781*
  36. 1970 Burke, K., and Durotoye, 'Bisi, Late Quaternary climatic variations in

- Southwestern Nigeria, evidence from pediments and pediment deposits:  
Bull. d'Asequa, v. 25, p. 79-96
37. 1970 Burke, K., and Durotoye, 'Bisi, Boulder slide on an Inselberg in the Nigerian Rain Forest: Jour. Geol., v. 78, p. 733-735
  38. 1970 Burke, K., and Durotoye, 'Bisi, The Quaternary in Nigeria: a review: Bull. d'ASEQUA, v. 27, p. 70-98 (also in Bull. d'IFAN)
  39. 1971 Burke, K., Durotoye, 'Bisi, and Whiteman, Arthur, Dry period south of the Sahara 20,000 years ago: West Afr. Jour. Arch., v. 1, p. 1-8
  40. 1971 Late Quaternary subsidence in the Niger delta, sea level rise and isostatic adjustment to waterload (abstract): Jour. Min. Geol., Nigerian Min. Geol. Met. Soc., v. 6, p. 75
  41. 1971 Burke, K., and Dewey, J., The lost oceans of Africa (abstract): Jour. Min. Geol., Nigerian Min. Geol. Met. Soc., v. 6, p. 75
  42. 1971 Burke, K., and Whiteman, Arthur, The geological history of the Gulf of Guinea (abstract): Jour. Min. Geol., Nigerian Min. Geol. Met. Soc., v. 6, p. 75
  43. 1971 Recent faulting near the Volta dam: Nature, v. 231, p. 439-440
  44. 1971 Burke, K., Dessauvague, T.F.J., and Whiteman, A. J., The opening of the Gulf of Guinea and the geological history of the Benue Trough and the Niger delta: Nature Phys. Sci., v. 233, p. 51-55
  45. 1971 Dessauvague, T.F.J., and Burke, K., Geological map at 1:250,000 of Yola sheet Nigeria (1 sheet): Univ. Ibadan, Nigeria
  46. 1971 Longshore drift and submarine canyons in the development of the Niger delta: Abstract VIII, Int. Sedimentological Cong., Heidelberg
  47. 1971 Burke, K., and Durotoye, 'Bisi, Geomorphology and superficial deposits related to Late Quaternary climatic variation in Southwestern Nigeria: Zeits. f. Geomorphologie, v. 15, p. 430-444
  48. 1972 Southern Nigerian soils and geomorphology related to climatic change: West Afr. Jour. Arch., v. 2, p. 122-127
  49. 1972 Burke, K., and Whiteman, A. J., Uplift, rifting and the break-up of Africa (abstract): EOS Trans. Amer. Geophys. Union, v. 53, p. 517
  50. 1972 Burke, K., Grant, N. K., and Freeth, S. J., Granite gneiss from partial fusion of banded gneiss (abstract): Proc. Ibadan Conf. on African Geol., December 1970, p. 103-104
  51. 1972 Burke, K., Dessauvague, T.F.J., and Whiteman, A.J., Geological History of the Benue Trough: Proc. Ibadan Conf. on African Geol., December 1970, p. 187-206
  52. 1972 Ajakaiye, D. E., and Burke, K., Bouguer Gravity map of Nigeria at 1:2 million: compiled for the Nigerian Upper Mantle Project 1970
  53. 1972 Longshore drift, submarine canyons and submarine fans in development of the Niger delta: Bull. Amer. Assoc. Petroleum Geologists, v. 56,

p. 1975-1983

54. 1972 Burke, K., and Dewey, J. F., Orogeny in Africa: Proc. Ibadan Conf. on African Geol., December 1970, p. 583-608
55. 1972 Burke, K., and Wilson, J. T., Is the African plate stationary? Nature, v. 239, p. 387-390
56. 1972 Wilson, J. T., and Burke, K., Two types of mountain building: Nature, v. 239, p. 448-449
57. 1972 Dewey, J. F., and Burke, K., Permian, metastable and plate tectonic regimes in the Precambrian: Abstracts with Programs, Geol. Soc. American Ann. Mtg., v. 4, p. 462
58. 1972 Burke, K., and Durotoye, A. B., The Quaternary in Nigeria: Proc. Ibadan Conf. on African Geol. 1970, p. 325-348
59. 1973 Ajakaiye, D. E., and Burke, K., A Bouguer anomaly map of Nigeria: Tectonophysics, v. 16, p. 103-115
60. 1973 Burke, K., and Waterhouse, J. B., Saharan glaciation dated in North America: Nature, v. 241, p. 267
61. 1973 Burke, K., Kidd, W.S.F., and Wilson, J. T., Plumes and concentric plume traces of the Eurasian plate: Nature Phys. Sci., v. 241, p. 128-129
62. 1973 Burke, K., and Whiteman, A. J., Uplift, rifting and the breakup of Africa, in Proceedings NATO Conference on Continental Drift, v. 2, Newcastle, April 1972, Tarling, D. H., ed., p. 735-745
63. 1973 Dewey, J.F., and Burke, K., An outline of Precambrian plate development in Proceedings NATO Conference on Continental Drift, v. 2, Newcastle, April 1972, Tarling, D. H., ed., p. 1035-1046
64. 1973 Burke, K., and Dewey, J.F., Plume generated triple junctions: key indicators in applying plate tectonics to old rocks: Jour. Geol., v. 81, p. 406-433
65. 1973 Dewey, J.F., and Burke, K., Tibetan, Variscan and Precambrian basement reactivation: products of continental collision: Jour. Geol., v. 81, p. 683-692
66. 1973 Burke, K., Kidd, W.S.F., and Wilson, J.T., Relative and latitudinal motion of Atlantic hot spots: Nature, v. 245, p. 133-137
67. 1974 Hoffman, P., Dewey, J.F., and Burke, K., Aulacogens and their genetic relation to geosynclines, in Dott R.H., ed., Modern and Ancient Geosynclinal Sedimentation, SEPM publications, No. 19, p. 38-55
68. 1974 Dewey, J.F., and Burke, K., Two plates in Africa during the Cretaceous: Nature, v. 249, p. 313-316
69. 1974 Burke, K., and Dewey, J.F., Hot spots and continental breakup: implications for collisional orogeny: Geology, v. 2, p. 57-60
70. 1975 Burke, K., and Kidd, W.S.F., Earth, heat flow in: McGraw-Hill Yearbook of Science and Technology, p. 165-168

71. 1975 Atlantic evaporites formed by evaporation of water spilled from Pacific, Tethyan, and Southern oceans: *Geology*, v. 3, p. 613-616
72. 1975 Petroleum and global tectonics, in Fischer, A.G., and Judson, S., eds.: *Amer. Jour. Sci.*, v. 276, No. 3, p. 398-400-Review
73. 1976 Burke, K., Dewey, J.F., and Kidd, W.S.F., Dominance of horizontal movements, arcs and microcontinental collisions during the later Permian regime, in Windley, B.F., ed., *The Early History of the Earth*: John Wiley and Sons, p. 113-130
74. 1976 Burke, K., and Wilson, J.T., Hot spots on the earth's surface: *Scientific American*, v. 235, No. 2, p. 46-60
75. 1976 Burke, K., Dewey, J.F., and Kidd, W.S.F., Precambrian palaeomagnetic results compatible with contemporary operation of the Wilson cycle. *Tectonophysics*, v. 33, p. 287-299.
76. 1976 Freeth, S.J., Grant, N.K. and Burke, K., The structure and sequence of geological events in the basement complex of the Ibadan area, western Nigeria: *Precambrian Research*, v. 3, p. 537-545.
77. 1976 Development of graben associated with the initial ruptures of the Atlantic Ocean: *Tectonophysics*, v. 36, p. 93-112.
78. 1976 The Chad Basin: an active intra-continental basin: *Tectonophysics*, v. 36, p. 197-206.
79. 1976 Neogene and Quaternary tectonics of Nigeria, in *Geol. of Nigeria*, ed., C.A. Kogbe, pp. 363-369, Elizabethan Publ. Company, Surulere Nigeria.
80. 1977 Burke, Kevin; Dewey, J.F. and Kidd, W.S.F., World distribution of sutures - the sites of former oceans: *Tectonophysics*, v. 40, p. 69-99.
81. 1977 Diverse geology of Atlantic-type continental margins and some possible implications for U.S. Offshore Atlantic: *Ninth Annual Offshore Technology Conference, 1977 Proceedings*, v. III, p. 77-84.
82. 1977 Aulacogens and continental breakup: *Ann. Rev. Earth Planet. Sci.*, v. 5, p. 371-396.
83. 1977 Burke, K. and Fox, P.J. (eds.), *Caribbean Problems: a report on a workshop held to help identify important geological problems related to the evolution of the Caribbean*: Albany, New York, April 20-23, 1977
84. 1977 Burke, K. and Molnar, Peter, Erik Norin Penrose Conference on Tibet: *Geology* v. 5, p. 461-463.
85. 1978 Sengor, A.M. Celal, Burke, Kevin and Dewey, John F., Rifts at high angles to orogenic belts: tests for their origin and the upper Rhine graben as an example: *Amer. Jour. Sci.*, v. 278. p. 24-40.
86. 1978 Burke, K. and Kidd, W.S.F., Were Archean continental geothermal gradients much steeper than those of today? *Nature*, v. 272 p. 240-241
87. 1978 Hayes, J.D., Burke, K. and Sclater, J. An integrated approach to Atlantic margin studies, in *Proc. Offshore Technology Conf. Dallas, Texas, May 8-11, 1978*.

- 87(a) 1978 Burke, K., and Sengor, A.M.C. Relative Timing of rifting and volcanism on earth and its tectonic implications. Geophys. Res. Letter 5, 419-21.
88. 1978 Burke, K., Evolution of continental rift systems in the light of plate tectonics: in Ramberg, I.B. and Neumann, E.R., eds. Tectonics and Geophysics of Continental Rifts, D. Reidel Pub. Co., Dordrecht, p. 1-9.
89. 1978 Burke, K., Fox, P.J. and Sengor, A.M.C., Buoyant ocean floor and the evolution of the Caribbean. Jour. Geophys. Res., v. 83, p. 3949-3954.
90. 1978 Burke, K., Turcotte, D.L., Global sea-level changes and the thermal structure of the Earth: Earth Planet. Sci. Lett., v. 41, p. 341-346.
91. 1979 Burke, K., McGetchin, T.R., Thompson, G. and Young, R., Plateau uplift: mode and mechanism, EOS, v. 60, p. 64-67.
92. 1979 Burke, K. and Sengor, A.M.C., Comments on: Why I do not accept plate tectonics, EOS, v. 70, p. 207-211.
93. 1979 Burke, K., Thiessen, R. and Kidd, W.S.F., African hotspots and their relation to the underlying mantle, Geology, v. 7, p. 263-266.
94. 1979 Burke, K., The edges of the ocean: an introduction. In: Oceanus, v. 22, No. 3, Ocean/continent boundaries, p. 2-9.
95. 1979 Burke, K. and Sengor, A.M.C., Review of plate tectonics, Reviews of Geophysics and Space Physics, 17, p. 1018-1024.
96. 1980 Burke, K., Intracontinental rifts and aulacogens in Continental Tectonics National Academy, Geophysics Research Board, p. 42-49.
97. 1980 Burke, K. and Sawkins, F.J., Extensional tectonics and mid-Paleozoic massive sulfide occurrences in Europe, Geol. Rundsch. 69, 349-360.
98. 1980 Burke, K., and W.S.F. Kidd, Volcanism on Earth through time. In the continental crust and its mineral deposits, Geol. Assoc. Canada Spec. Paper 20, 503-522.
99. 1980 Burke, K., Grippi, J., and Sengor, A.M.C., Tectonic style of the northern boundary of the Caribbean, Jour. Geology, v. 88, p. 375-386.
100. 1980 White, G.W. and Burke, K., Outline of the tectonic evolution of the Gulf of Mexico and the Caribbean region. Houston Geological Society Bulletin, June 1980, p. 8-13.
101. 1981 Livacarli, R., Burke, K., and Sengor, A.M.C., Was the Laramide orogeny related to subduction of an oceanic plateau?, Nature 289, 276-278.
102. 1981 Burke, K. (with W.S.F. Kidd and D.L. Turcotte) Tectonics of basaltic volcanism, Chapter 6 in "Basaltic Volcanism," Lunar and Planetary Institute, Pergamon Press. pp. 804-898.
103. 1981 Burke, K., and J.F. Dewey, W.S.F. Kidd and A.M.C. Sengor, Continental collisions analogous to that forming the Qinghai-Xizang Plateau in Geological and Ecological Studies of the Qinghai-Xizang Plateau, Science Press Beijing, Gordon and Breach, New York, pp. 743-746.
104. 1982 Sengor, A.M.C., Kevin Burke and J.F. Dewey, Tectonics of the North Anatolian transform fault in: Multidisciplinary approach to Earthquake Prediction, ed. A. Mete Isikara and Andreas Vogel Friedr. Vieweg and Sohn, pp. 3-22

105. 1981 Burke, K., Two problems of intracontinental tectonics: relevation of old mountain belts and subsidence of intra-continental basins in Proceeding of Intl. Conf. on Intracontinental Earthquakes, Ohrid Yugoslavia 1979 ed. Jakim Petrowski and Clarence Allen Skopje 1981, pp. 157-164

## In Press:

106. Rifts and Sutures of the World second edition Lunar and Planetary Institute, Burke and eight other authors.
107. Structure and Stratigraphy of the northern Wagwater Belt Jamaica with Paul Mann: Trans. 9th Carib. Geol. Conf. Santo Domingo
108. Submitted: with Susan Anderson Sutures of the Grenville terrain  
Geol. Soc. America Special Paper on Proterozoic Conference Madison, Wisconsin 1980
109. Submitted Caribbean tectonics and relative plate motion, Geol. Soc. America  
Special paper on Caribbean. ed. Hargraves and Bonini.