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## CURRICULUM VITAE

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### Affiliation

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### Date and Place of Birth

March 1946  
Sydney, Australia

### University Education

- 1971 Doctor of Philosophy, University of Sydney  
Conferred in Geomorphology  
Dissertation: Aspects of the Evolution of Fluvially Eroded Landscapes.
- 1966 Bachelor of Arts with First Class Honors, University of Sydney  
University Medal in Geomorphology

### Honors and Scholarships

- 2007 SUNY Chancellor's Award for Excellence in Scholarship and Creative Activities
- 2003 Geomorphology Specialty Group, Association of American Geographers Melvin Marcus Distinguished Career Award
- 2002 British Society for Geomorphology (formally the British Geomorphological

- Research Group) David Linton Award
- 1992 Association of American Geographers Honors
- 1985 Gladys W. Cole Research Award presented by the Geological Society of America.
- 1985 G.K. Gilbert Award for Excellence in Geomorphological Research presented by the Geomorphology Specialty Group of the Association of American Geographers
- 1982-2002 Fellow of the Geological Society of America
- 1971-1973 Izaak Walton Killam Memorial Post-Doctoral Fellowship, University of Alberta
- 1967-1971 Commonwealth Post-Graduate Scholarship, University of Sydney
- 1966 University Medal in Geomorphology, University of Sydney
- 1963-1966 Teacher's College Scholarship, University of Sydney

#### Academic Appointments

- 2007- University at Buffalo, The State University of New York, Distinguished Professor Emeritus
- 2002-2007 University at Buffalo, The State University of New York Distinguished Professor
- 1988-1991 State University of New York at Buffalo Chair, Department of Geography
- 1984-2002 State University of New York at Buffalo Professor of Geography
- 1977-1984 State University of New York at Buffalo Associate Professor of Geography
- 1973-1977 University of New South Wales, Australia Lecturer in Geography
- 1971-1973 University of Alberta, Canada Izaak Walton Killam Memorial Post-Doctoral Fellow

### Visiting Appointments

- 1987 Arizona State University  
Distinguished Visiting Professor
- 1976 University of Exeter, England  
Visiting member of staff

### Edited Books

- 2009 Parsons, A.J. and Abrahams, A.D., Editors, **Geomorphology of Desert Environments**, Second Edition, Springer, Dordrecht, The Netherlands, 835 p.
- 1994 Abrahams, A.D. and Parsons, A.J., Editors, **Geomorphology of Desert Environments**, Chapman and Hall, London, 674 p.
- 1992 Parsons, A.J. and Abrahams, A.D., Editors, **Overland Flow: Hydraulics and Erosion Mechanics**, London, UCL Press, 438 p.
- 1992 Dixon, J.C. and Abrahams, A.D., Editors, **Periglacial Geomorphology**, Chichester, John Wiley and Sons, 354 p.
- 1986 Abrahams, A.D., Editor, **Hillslope Processes**, Boston, Allen and Unwin, 416 p.

### Publications in Refereed Journals

- 2006 Hu, S. and Abrahams, A.D. "Partitioning resistance to overland flow on rough mobile beds," **Earth Surface Processes and Landforms**, v. 31, p. 1280-1291.
- 2006 Howes, D.A., Abrahams, A.D. and Pitman, E.B. "One- and two-dimensional modelling of overland flow in semiarid shrubland, Jornada Basin, New Mexico," **Hydrological Processes**, v. 20, p. 1027-1046.
- 2006 Abrahams, A.D. and Gao, P. "A bed-load transport model for rough turbulent open-channel flows on plane beds," **Earth Surface Processes and Landforms**, v. 31, p. 910-928.
- 2005 Hu, S. and Abrahams, A.D. "The effect of bed mobility on resistance to overland flow," **Earth Surface Processes and Landforms**, v. 30, p. 1461-1470.
- 2004 Hu, S. and Abrahams, A.D. "Resistance to overland flow due to bed-load transport on plane mobile beds," **Earth Surface Processes and Landforms**, v. 29, p.1691-1701.

- 2004 Gao, P. and Abrahams, A.D., "Bedload transport resistance in rough open-channel flows." **Earth Surface Processes and Landforms**, v. 29, p. 423-435.
- 2003 Abrahams, A.D., Parsons, A.J., and Wainwright, J. "Disposition of rainwater under creosotebush," **Hydrological Processes**, v. 17, p. 2555-2566.
- 2003 Howes, D.A. and Abrahams, A.D. "Modeling runoff and runoff in a desert shrubland ecosystem, Jornada Basin, New Mexico," **Geomorphology**, v. 53, p. 45-73.
- 2003 Abrahams, A.D., "A bedload transport equation for sheet flow," **Journal of Hydraulic Engineering**, v. 129, p. 159-163.
- 2002 Parsons, A.J., Wainwright, J., Schlesinger, W.H., and Abrahams, A.D. "The role of overland flow in sediment and nutrient budgets of mesquite dune fields, southern New Mexico," **Journal of Arid Environments**, v. 53, p. 61-71.
- 2002 Neave, M. and Abrahams, A.D. "Vegetation influences on water yields from grassland and shrubland ecosystems in the Chihuahuan Desert," **Earth Surface Processes and Landforms**, v. 27, p. 1011-1020.
- 2002 Wainwright, J., Parsons, A.J., Schlesinger, W.H., and Abrahams, A.D., "Hydrology-vegetation interactions in areas of discontinuous flow on a semi-arid bajada, southern New Mexico," **Journal of Arid Environments**, v. 51, p. 319-338.
- 2001 Abrahams, A.D., Li, G., Krishnan, C., and Atkinson, A.J., "A sediment transport equation for interrill overland flow on rough surfaces," **Earth Surface Processes and Landforms**, v. 26, p. 1443-1459.
- 2001 Neave, M. and Abrahams, A.D., "Impact of small mammal disturbances on runoff and sediment yield from grassland and shrubland ecosystems in the Chihuahuan Desert," **Catena**, v. 44, p. 285-303.
- 2000 Atkinson, J.F., Abrahams, A.D., Krishnan, C., and Li, G., "Shear stress partitioning and sediment transport by overland flow," **Journal of Hydraulic Research**, v. 38, p. 37-40.
- 2000 Abrahams, A.D., Gao, P., Aebly, F.A., "Relation of sediment transport capacity to stone cover and size in rain-impacted interrill overland flow," **Earth Surface Processes and Landforms**, v. 25, p. 497-504.
- 2000 Wainwright, J., Parsons, A.J., and Abrahams, A.D., "Plot-scale studies of vegetation, overland flow, and erosion interactions: Case studies from Arizona and New Mexico," **Hydrological Processes**, v. 14, p. 2921-2943.

- 1999 Parsons, A.J., Wainwright, J., Stone, P.M., and Abrahams, A.D., "Transmission losses in rills on dryland hillslopes," **Hydrological Processes**, v. 13, p. 2897-2905.
- 1999 Wainwright, J., Parsons, A.J., and Abrahams, A.D., "Rainfall energy under creosotebush." **Journal of Arid Environments**, v. 43, p. 111-120.
- 1999 Schlesinger, W.H., Abrahams, A.D., Parsons, A.J., and Wainwright, J., "Nutrient losses in runoff from grassland and shrubland habitats in southern New Mexico: I. Rainfall simulation experiments." **Biogeochemistry**, v. 45, p. 21-34.
- 1999 Li, G. and Abrahams, A.D., "Controls of sediment transport capacity in laminar interrill flow on stone-covered surfaces." **Water Resources Research**, v. 35, p. 305-310.
- 1999 Wainwright, J., Parsons, A.J., Abrahams, A.D., and Simanton, J.R., Field and computer simulation experiments on the formation of desert pavement," **Earth Surface Processes and Landforms**, v. 24, p. 1025-1037.
- 1998 Abrahams, A.D., "Discussion: 'Macroscale surface roughness and frictional resistance in overland flow' by D.S.L. Lawrence," **Earth Surface Processes and Landforms**, v. 23, p. 857-859.
- 1998 Abrahams, A.D. and Li, G., "Effect of saltating sediment on flow resistance and bed roughness in overland flow," **Earth Surface Processes and Landforms**, v. 23, p. 953-960.
- 1998 Abrahams, A.D., Li, G., Krishnan, C., and Atkinson, J.F., "Predicting sediment transport by interrill overland flow on rough surfaces." **Earth Surface Processes and Landforms**, v. 23, p. 481-492.
- 1997 Li, G. and Abrahams, A.D., "Effect of saltating sediment on the determination of the mean velocity of overland flow." **Water Resources Research**, v. 33, p. 341-347.
- 1997 Parsons, A.J., Wainwright, J., Abrahams, A.D., and Simanton, J.R., "Distributed dynamic modelling of interrill overland flow." **Hydrological Processes**, v. 11, p. 1833-1859.
- 1996 Abrahams, A.D., Li, G., and Atkinson, J.F., "Reply to Comment on 'Step-pool streams: Adjustment to maximum flow resistance'." **Water Resources Research**, v. 32, p.3403-3404.
- 1996 Li, G., Abrahams, A.D. and Atkinson, J.F., "Correction factors in the determination of mean velocity of overland flow," **Earth Surface Processes and Landforms**, v. 21, p. 509-515.
- 1996 Abrahams, A.D., Li, G. and Parsons, A.J., "Rill hydraulics on a semiarid hillslope, southern Arizona," **Earth Surface Processes and Landforms**, v. 21, p. 35-47.
- 1995 Abrahams, A.D., Parsons, A.J., and Wainwright, J., "Effects of vegetation change on interrill

- runoff and erosion, Walnut Gulch, southern Arizona." **Geomorphology**, v. 13, p. 37-48.
- 1995 Abrahams, A.D., Parsons, A.J., and Wainwright, J., "Controls and determination of resistance to overland flow on semiarid hillslopes, Walnut Gulch." **Journal of Soil and Water Conservation**, v. 50, p. 457-460.
- 1995 Abrahams, A.D., Li, G., and Atkinson, J.F., "Step-pool streams: adjustment to maximum flow resistance," **Water Resources Research**, v. 31, p. 2593-2602.
- 1995 Parsons, A.J., Abrahams, A.D., and Wainwright, J., "Responses of interrill runoff and erosion rates to vegetation change in southern Arizona," **Geomorphology**, v. 14, p. 311-317.
- 1995 Wainwright, J., Parsons, A.J. and Abrahams, A.D., "A simulation study of the role of splash erosion in the development of desert pavements," **Earth Surface Processes and Landforms**, v. 20, p. 277-291.
- 1994 Parsons, A.J., Abrahams, A.D., and Wainwright, J., "On determining resistance to interrill overland flow," **Water Resources Research**, v. 30, p. 3515-3521.
- 1994 Abrahams, A.D., "Steepland geomorphology: Preface," **Geomorphology**, v. 9, p. iii-iv.
- 1994 Abrahams, A.D., Parsons, A.J. and Wainwright, J., "Resistance to overland flow on semiarid grassland and shrubland hillslopes, Walnut Gulch, southern Arizona," **Journal of Hydrology**, v. 156, p. 431-446.
- 1994 Abrahams, A.D. and Parsons, A.J., "Hydraulics of interrill overland flow on stone-covered desert surfaces," **Catena**, v. 23, p. 111-140.
- 1994 Parsons, A.J., Abrahams, A.D. and Wainwright, J., "Rainsplash and erosion rates in an interrill area on semi-arid grassland, southern Arizona," **Catena**, v. 22, p. 215-226.
- 1993 Parsons, A.J., Wainwright, J. and Abrahams, A.D., "Tracing sediment movement in interrill overland flow on a semi-arid grassland hillslope using magnetic susceptibility," **Earth Surface Processes and Landforms**, v. 18, p. 721-732.
- 1993 Abrahams, A.D. and Atkinson, J.F., "Relation between grain velocity and sediment concentration in overland flow," **Water Resources Research**, v. 29, p. 3021-3028.
- 1993 Abrahams, A.D. and Marston, R.A., "Drainage basin sediment budgets: An introduction," **Physical Geography**, v. 14, p. 221-224.
- 1993 Luk, S.H., Abrahams, A.D., and Parsons, A.J., "Sediment sources and sediment transport by rill flow and overland flow on a semi-arid piedmont slope, southern Arizona," **Catena**, v. 20, p. 93-111.

- 1992 Parsons, A.J. and Abrahams, A.D., "Controls on sediment removal by interrill overland flow on semi-arid hillslopes," **Israel Journal of Earth Sciences**, v. 41, p. 177-188.
- 1992 Bergeron, N.E. and Abrahams, A.D., "Estimating shear velocity and roughness length from velocity profiles," **Water Resources Research**, v. 28, p. 2155-2158.
- 1992 Parsons, A.J., Abrahams, A.D., and Simanton, J.R., "Microtopography and soil-surface materials on semi-arid piedmont hillslopes, southern Arizona," **Journal of Arid Environments**, v. 22, p. 107-115.
- 1991 Abrahams, A.D. and Parsons, A.J., "Resistance to overland flow on desert pavement and its implications for sediment transport modeling," **Water Resources Research**, v. 27, p. 1827-1836.
- 1991 Abrahams, A.D., Parsons, A.J., and Luk, S-H, "The effect of spatial variability in overland flow on the downslope pattern of soil loss on a semiarid hillslope, southern Arizona," **Catena**, v. 18, p. 255-270.
- 1991 Abrahams, A.D. and Parsons, A.J., "The relation between sediment yield and gradient on debris-covered hillslopes, Walnut Gulch, Arizona," **Bulletin of the Geological Society of America**, v. 103, p. 1109-1113
- 1991 Parsons, A.J., Abrahams, A.D., and Luk, S-H, "Size characteristics of sediment in interrill overland flow on a semi-arid hillslope, southern Arizona," **Earth Surface Processes and Landforms**, v. 16, p. 143-152.
- 1991 Abrahams, A.D. and Parsons, A.D., "Relation between infiltration and stone cover on a semiarid hillslope, southern Arizona," **Journal of Hydrology**, v. 122, p. 49-59.
- 1990 Abrahams, A.D., Soltyka, N., Parsons, A.J., and Hirsch, P.J., "Fabric analysis of a desert debris slope: Bell Mountain, California," **Journal of Geology**, v. 98, p. 264-272.
- 1990 Parsons, A.J., Abrahams, A.D., and Luk, S-H, "Hydraulics of overland flow on a semi-arid hillslope, southern Arizona," **Journal of Hydrology**, v. 117, p. 255-273.
- 1990 Abrahams, A.D. and Parsons, A.J., "Determining the mean depth of overland flow in field experiments on flow hydraulics," **Water Resources Research**, v. 26, p. 501-503.
- 1990 Andrie, R. and Abrahams, A.D., "Fractal techniques and the surface roughness of talus slopes -- Reply," **Earth Surface Processes and Landforms**, v. 15, p. 283-285.
- 1989 Abrahams, A.D., Parsons, A.J., and Luk, S-H., "Distribution of depth of overland flow on desert hillslopes and its implications for modeling soil erosion," **Journal of Hydrology**, v.

- 106, p. 177-184.
- 1989 Andrie, R. and Abrahams, A.D., "Fractal techniques and the surface roughness of talus slopes," **Earth Surface Processes and Landforms**, v. 14, p. 197-209.
- 1989 Abrahams, A.D., "The measurement of girdle strength and imbrication in particle fabrics -- discussion," **Journal of Sedimentary Petrology**, v. 59, p. 636-637.
- 1989 Parsons, A.J. and Abrahams, A.D., "A miniature flume for sampling overland flow," **Physical Geography** v. 10, p. 85-94.
- 1989 Dohrenwend, J.C., Abrahams, A.D., and Turrin, B.D., "Drainage development on basaltic lava flows, Cima volcanic field, southeast California, and Lunar Crater volcanic field, south-central Nevada -- Reply," **Bulletin of the Geological Society of America**, v. 101, p. 982-986.
- 1988 Abrahams, A.D., Luk, S-H., and Parsons, A.J., "Threshold relations for the transport of sediment by overland flow on desert hillslopes," **Earth Surface Processes and Landforms**, v. 13, p. 407-409.
- 1988 Abrahams, A.D., Parsons, A.J., and Luk, S-H., "Hydrologic and sediment responses to simulated rainfall on desert hillslopes in southern Arizona," **Catena**, v. 15, p. 103-117.
- 1987 Parsons, A.J. and Abrahams, A.D., "Gradient-particle size relations on quartz monzonite debris slopes in the Mojave Desert," **Journal of Geology**, v. 95, p. 423-432.
- 1987 Abrahams, A.D. and Updegraff, J., "Some space-filling controls on the arrangement of tributaries in dendritic channel networks," **Water Resources Research**, v. 23, p. 489-495.
- 1987 Abrahams, A.D. and Parsons, A.J., "Identification of strength equilibrium rock slopes: further statistical considerations," **Earth Surface Processes and Landforms**, v. 12, p. 631-635.
- 1987 Dohrenwend, J.C., Abrahams, A.D., and Turrin, B.D., "Drainage development on basaltic lava flows, Cima volcanic field, southeast California, and Lunar Crater volcanic field, south-central Nevada," **Bulletin of the Geological Society of America**, v. 99, p. 405-413
- 1986 Abrahams, A.D. and Mark, D.M., "The random topology model of channel networks: bias in statistical tests," **The Professional Geographer**, v. 38, p. 77-81.
- 1986 O'Neill, M.P. and Abrahams, A.D., "Objective identification of meanders and bends," **Journal of Hydrology**, v. 83, p. 337-353.
- 1986 Abrahams, A.D., Parsons, A.J., and Luk, S-H., "Field measurement of the velocity of



- overland flow using dye tracing," **Earth Surface Processes and Landforms**, v. 11, p. 653-657.
- 1986 Abrahams, A.D., Parsons, A.J., and Luk, S-H., "Resistance to overland flow on desert hillslopes," **Journal of Hydrology**, v. 88, p. 343-363.
- 1986 Luk, S-H., Abrahams, A.D., and Parsons, A.J., "A simple rainfall simulator and trickle system for hydro-geomorphological experiments," **Physical Geography**, v. 7, p. 344-356.
- 1985 Abrahams, A.D., Parsons, A.J., and Hirsch, P.J., "Hillslope gradient-particle size relations: evidence for the formation of debris slopes by hydraulic processes in the Mojave Desert," **Journal of Geology**, v. 93, p. 347-357.
- 1985 Abrahams, A.D., "Lithological control of bedrock meander dimensions in the Appalachian Valley and Ridge province: a comment," **Earth Surface Processes and Landforms**, v. 10, p. 635-638.
- 1984 Parsons, A.J. and Abrahams, A.D., "Mountain mass denudation and piedmont formation in the Mojave and Sonoran Deserts," **American Journal of Science**, v. 284, p. 255-271.
- 1984 Abrahams, A.D., "Channel networks: a geomorphological perspective," **Water Resources Research**, v. 20, p. 161-188.
- 1984 Abrahams, A.D., Parsons, A.J., Cooke, R.U. and Reeves, R.W., "Stone movement on hillslopes in the Mojave Desert: a 16-year record," **Earth Surface Processes and Landforms**, v. 9, p. 365-370.
- 1984 O'Neill, M.P. and Abrahams, A.D., "Objective identification of pools and riffles," **Water Resources Research**, v. 20, p. 920-926.
- 1984 Abrahams, A.D., "Tributary development along winding streams and valleys," **American Journal of Science**, v. 284, p. 863-892.
- 1984 Abrahams, A.D. and Ponczynski, J.J., "Drainage density in relation to precipitation intensity in the U.S.A.," **Journal of Hydrology**, v. 75, p. 383-388.
- 1984 Abrahams, A.D., "Spatial dependency of hydraulic geometry exponents in a subalpine stream -- a comment," **Journal of Hydrology**, v. 75, p. 389-393.
- 1984 Abrahams, A.D., "The development of tributaries of different sizes along winding streams and valleys," **Water Resources Research**, v. 20, p. 1791-1796.
- 1983 Abrahams, A.D. and Flint, J.J., "Geological controls on the topological properties of some trellis channel networks," **Bulletin of the Geological Society of America**, v. 94, p. 80-91.

- 1983 Ponczynski, J.J. and Abrahams, A.D., "Impact of construction activities on the sediment response of a small drainage basin in western New York," **Physical Geology**, v. 4, p. 25-37.
- 1982 Abrahams, A.D. and Miller, A.J., "The mixed gamma model for channel link lengths," **Water Resources Research**, v. 18, p. 1126-1136.
- 1982 Abrahams, A.D. and Mark, D.M., "Stream curvature and bank erosion: a model based on the momentum equation: a discussion," **Journal of Geology**, v. 90, p. 459-461.
- 1982 Abrahams, A.D., "The relation of chain length to chain curvature in natural channel networks," **Earth Surface Processes and Landforms**, v. 7, p. 469-473.
- 1981 Hirsch, P.J. and Abrahams, A.D., "The properties of bed sediments in pools and riffles," **Journal of Sedimentary Petrology**, v. 51, p. 757-760.
- 1980 Abrahams, A.D., "Channel link density and ground slope," **Annals of the Association of American Geographers**, v. 70, p. 80-93.
- 1980 Abrahams, A.D., "Divide angles and their relation to interior link lengths in natural channel networks," **Geographical Analysis**, v. 12, p. 157-171.
- 1980 Roy, A.G. and Abrahams, A.D., "Rhythmic spacing and origin of pools and riffles: discussion," **Bulletin of the Geological Society of America**, Part 1, v. 91, p. 248-249.
- 1980 Abrahams, A.D., "A multivariate analysis of chain lengths in natural channel networks," **Journal of Geology**, v. 88, p. 681-696.
- 1979 Abrahams, A.D. and Cull, R.F., "The formation of alluvial landforms along New South Wales coastal streams," **Search**, v. 10, p. 187-188.
- 1977 Abrahams, A.D., "The factor of relief in the evolution of channel networks in mature drainage basins," **American Journal of Science**, v. 277, p. 626-646.
- 1977 Abrahams, A.D. and Parsons, A.J., "Long segments on low-angled hillslopes in New South Wales," **Area**, v. 9, p. 124-127.
- 1976 Abrahams, A.D. and Campbell, R.N., "Source and tributary-source link lengths in natural channel networks," **Bulletin of the Geological Society of America**, v. 87, p. 1016-1020.
- 1975 Abrahams, A.D., "Initial bifurcation process in natural channel networks," **Geology**, v. 3, p. 307-308.

- 1975 Abrahams, A.D., "Topologically random channel networks in the presence of environmental controls," **Bulletin of the Geological Society of America**, v. 86, p. 1459-1462.
- 1975 Abrahams, A.D. and Melville, M.D., "A source of error in surveying hillslopes by Abney level," **Area**, v. 7, p. 299-302.
- 1975 Abrahams, A.D. and Oak, H.L., "Shore platform widths between Port Kembla and Durras Lake, New South Wales," **Australian Geographical Studies**, v. 13, p. 190-194.
- 1975 Abrahams, A.D., "Evolutionary changes in link lengths: further evidence for stream abstraction," **Transactions of the Institute of British Geographers**, v. 1 (New Series), p. 225-230.
- 1975 Abrahams, A.D., "Some thoughts on the development of shore platforms south of Sydney," **Geography Bulletin**, v. 7, p. 83-84.
- 1973 Abrahams, A.D., "Environmental constraints on the substitution of space for time in the study of natural channel networks: reply," **Bulletin of the Geological Society of America**, v. 84, p. 353-356.
- 1972 Abrahams, A.D., "Drainage densities and sediment yields in eastern Australia," **Australian Geographical Studies**, v. 10, p. 19-41.
- 1972 Abrahams, A.D., "Environmental constraints on the substitution of space for time in the study of natural channel networks," **Bulletin of the Geological Society of America**, v. 83, p. 1523-1530.
- 1972 Abrahams, A.D., "Factor analysis of drainage basin properties: evidence for stream abstraction accompanying degradation of relief," **Water Resources Research**, v. 8, p. 624-633.
- 1972 Abrahams, A.D., "The significance of maximum extension of drainage networks for the frequency distribution of interior link lengths," **Journal of Geology**, v. 80, p. 730-736.
- 1970 Abrahams, A.D., "An evaluation of Melton's order-by-order growth analysis," **Australian Geographical Studies**, v. 8, p. 57-70.
- 1970 Abrahams, A.D., "Towards a precise definition of drainage basin axis: comment," **Australian Geographical Studies**, v. 8, p. 84-86.
- 1968 Abrahams, A.D., "Distinguishing between the concepts of steady state and dynamic equilibrium in Geomorphology," **Earth Science Journal**, v. 2, p. 160-166.

### Conference Proceedings

- 1994 Abrahams, A.D., Li, G., and Atkinson, J.F., "Step-pool streams: An adjustment to maximum flow resistance," **Hydraulic Engineering '94**, p. 815-816.
- 1992 Abrahams, A.D., Atkinson, J. F., Liou, C.-J., and Mackun, P.J., "Grain velocity, flow velocity, and sediment concentration in overland flow," **Proceedings of the Taiyuan Conference on the Application of Geographic Information Systems to Soil Erosion Management**, p. 107-120.
- 1990 Abrahams, A.D., Parsons, A.J., and Luk, S-H., "Field experiments on the resistance to overland flow on desert hillslopes," *Erosion, Transport and Deposition Processes*, **International Association of Hydrological Sciences Publication** 189, p. 1-18.
- 1987 Abrahams, A.D., "Hydraulic processes in the formation of debris slopes in the Mojave Desert, California," **Processus et Mesure de l'Erosion**. Edited by A. Godard and A. Rapp, Centre National de la Recherche Scientifique, Paris, p. 187-198.
- 1987 Abrahams, A.D., "Channel network topology: regular or random?" **International Geomorphology, 1986, Part II**. Edited by V. Gardiner, John Wiley and Sons, Chichester, p. 145-158.
- 1976 Abrahams, A.D., "The factor of relief in the evolution of channel networks in mature drainage basins," **International Geography, 1976**, Proceedings of the 23rd International Geographical Congress, Moscow, v. 1 (Geomorphology and Paleogeography), p. 121-125.
- 1973 Abrahams, A.D. and Kellerhals, R., "Correlations between water discharge and concentration of suspended solids for five large prairie rivers," **Fluvial Processes and Sedimentation**, Proceedings of the 9th Canadian Hydrology Symposium, University of Alberta, Edmonton, p. 96-113.

### Publications in Books

- 2006 Abrahams, A.D., Neave, M., Schlesinger, W.H., Wainwright, J., Howes, D.A., and Parsons, A.J., "Biogeochemical fluxes across piedmont slopes," **Structure and Function of a Chihuahuan Desert Ecosystem**, K. Havstad, L. Huenneke, and W.H. Schlesinger (eds.), Oxford University Press, 92-107.
- 2000 Abrahams, A.D., "Overland flow," **The Oxford Companion to the Earth**, P.L. Hancock and B.J. Skinner (eds.), Oxford University Press, p. 246-247.
- 1996 Parsons, A.J., Wainwright, J. and Abrahams, A.D., "Runoff and erosion on semi-arid

- hillslopes," **Advances in Hillslope Processes**, M.G. Anderson and S. Brooks (eds.), Wiley, Chichester, p. 1061-1078.
- 1994 Parsons, A.J. and Abrahams, A.D., "Geomorphology of desert environments," **Geomorphology of Desert Environments**, A.D. Abrahams and A.J. Parsons (eds.), Chapman and Hall, London, p. 3-12.
- 1994 Abrahams, A.D., Howard, A.D., and Parsons, A.J., "Rock-mantled slopes," **Geomorphology of Desert Environments**, A.D. Abrahams and A.J. Parsons (eds.), Chapman and Hall, London, p. 173-212.
- 1992 Abrahams, A.D. and Parsons, A.J., "Overland flow hydraulics and sediment transport on semiarid hillslopes, southern Arizona," **Geographical Snapshots of North America**, D.G. Janelle (ed.), p. 416-419. Guilford Press, New York.
- 1992 Abrahams, A.D., Parsons, A.J., and Hirsch, P.J. "Field and laboratory experiments on the resistance to interrill overland flow on semiarid hillslopes, southern Arizona," **Overland Flow: Hydraulics and Erosion Mechanics**, A.J. Parsons and A.D. Abrahams (eds.), p. 1-23. UCL Press, London.
- 1992 Parsons, A.J. and Abrahams, A.D., "Field investigations of sediment removal in interrill overland flow," **Overland Flow: Hydraulics and Erosion Mechanics**, A.J. Parsons and A.D. Abrahams (eds.), p. 307-334. UCL Press, London.
- 1992 Scoging, H., Parsons, A.J., and Abrahams, A.D., "Application of a dynamic overland flow model to a semi-arid hillslope, Walnut Gulch, Arizona," **Overland Flow: Hydraulics and Erosion Mechanics**, A.J. Parsons and A.D. Abrahams (eds.), p. 105-145. UCL Press, London.
- 1982 Abrahams, A.D. and Miller, A.J., "An empirical approach to the frequency distribution of exterior link lengths in natural channel networks," **Perspectives in Geomorphology**, H.S. Sharma (ed.), v. 2, p. 59-83.

#### Technical Reports

- 1974 Kellerhals, R., Abrahams, A.D. and von Giza, H., "Possibilities for using suspended sediment rating curves in the Canadian sediment survey program," **Studies in River Engineering, Hydraulics and Hydrology**, University of Alberta, Edmonton, 137 p.

#### Book Reviews

- 1994 Beven, K. and Kirkby, M.J. (Editors), 1993, "Channel Network Hydrology," John Wiley and

- Sons, Chichester. **Earth Surface Processes and Landforms**, v. 19, p. 675-676.
- 1990 Thomas, D. (Editor), 1989, "Arid Zone Geomorphology," Belhaven, London. **Journal of Geology**, v. 98, p. 798.
- 1988 Richards, K., 1987, "River Channels: Environment and Process," Basil Blackwell, Oxford. In **Geographical Analysis**, v. 20, 345-346.
- 1987 Gardiner, V., 1987, "International Geomorphology 1986," John Wiley & Sons, Chichester. In **Transactions of the Institute of British Geographers**, v. 12, p. 500-503.
- 1986 Cooke, R.U., 1984, "Geomorphological Hazards in Los Angeles," George Allen and Unwin, London. In **Annals of the Association of American Geographers**, v. 76, p. 308-309.

#### Conference Reports

- 1986 Abrahams, A.D., "First International Conference on Geomorphology," **The Professional Geographer**, v. 38, p. 182-183.
- 1984 Abrahams, A.D., "Landforms symposium meets," **Geotimes**, v. 29(1), p. 14-15.
- 1984 Abrahams, A.D., "Fourteenth Annual Geomorphology Symposium," **The Professional Geographer**, v. 36, p. 98-99.

#### Video Tapes

- 1989 Luk, S-H, Abrahams, A.D., and Parsons, A.J., **Field Experiments on Overland Flow Hydraulics and Erosion Mechanics, Southern Arizona.**

#### Conference Presentations

- 2005 "Predicting and Partitioning Resistance to Overland Flow on Rough Mobile Beds," Annual Meeting of the Association of American Geographers, Denver (presented by Shixiong Hu).
- 2004 "Resistance to Overland Flow Due to Bed-Load Transport on Plane Mobile Beds," Annual Meeting of the Association of American Geographers, Philadelphia (presented by Shixiong Hu).
- 2003 "A Sediment Transport Model for Channels and Hillslopes," Annual Meeting of the

- Association of American Geographers, New Orleans (jointly presented by Peng Gao and ADA).
- 2002 “A Sediment Transport Model for Channels and Hillslopes,” The David Linton Lecture, British Geomorphological Research Group Annual Meeting, Leeds, UK (with Peng Gao; presented by ADA).
- 2002 “Bed-load and total-load sediment transport equations for rough open-channel flow, Association of American Geographers Annual Meeting, Los Angeles, (with Peng Gao; presented by PG).
- 2002 “Mechanics of bed-load transport in open-channel flow” (with Peng Gao; presented by PG)
- 2001 “Bed-load and total load sediment transport equations for turbulent flow,” poster, American Geophysical Union, Fall Meeting, San Francisco, (with Peng Gao; presented by ADA)
- 2001 “Mechanics of bed-load transport in open-channel flow,” poster, American Geophysical Union, Fall Meeting, San Francisco (with A.D. Abrahams; presented by ADA).
- 2001 “Jornada Basin Hydrology,” 11<sup>th</sup> Annual Jornada Symposium, Las Cruces, NM (with A.J. Parsons, J. Wainwright, and W.H. Schlesinger; presented by AJP and JW).
- 2001 “A bedload transport equation for sheetflow,” Association of American Geographers Annual Meeting, New York City.
- 2001 “Bedload transport resistance in open channel flows on mobile beds” Association of American Geographers Annual Meeting, New York City (with Peng Gao; presented by PG).
- 2000 “One and two-dimensional modeling of surface runoff in a desert shrubland ecosystem,” Binghamton Geomorphology Symposium (with D.A. Howes; presented by DAH).
- 2000 “A sediment transport model for overland flow on rough surfaces,” Association of American Geographers Annual Meeting, Pittsburg (with G. Li, C. Krishnan, and J.F. Atkinson; presented by ADA)
- 2000 “Predicting bedload transport resistance in open-channel flows,” Association of American Geographers Annual Meeting, Pittsburg (with P. Gao; presented by PG).
- 1999 “Predicting bed load transport resistance in open-channel flow,” British Geomorphological Research Group Annual Meeting, Hull (with Peng Gao; presented by ADA).

- 1999 “Disposition of stemflow under creosotebush,” Jornada Symposium, Las Cruces (with A.J. Parsons and J. Wainwright; presented by ADA).
- 1999 “Raindrop erosion processes, vegetation mounds, and desert surfaces,” Jornada Symposium, Las Cruces (with A.J. Parsons and J. Wainwright; presented by JW).
- 1999 “Transmission losses in rills on dryland hillslopes,” International Conference on Drainage Basin Dynamics and Morphology, Jerusalem (with J. Wainwright and A.J. Parsons; presented by AJP).
- 1999 “Sediment transport equation for overland flow on rough surfaces,” International Conference on Drainage Basin Dynamics and Morphology, Jerusalem.
- 1999 “One- and two-dimensional modeling of surface runoff in a desert shrubland ecosystem,” Association of American Geographers Annual Meeting, Honolulu (with D.A. Howes; presented by DAH).
- 1998 “Effect of saltating sediment on overland flow hydraulics,” Association of American Geographers Annual Meeting, Boston (with Gary Li; presented by GL).
- 1998 “Modeling runoff in a desert shrubland ecosystem,” Association of American Geographers Annual Meeting, Boston (with David A. Howes; presented by DAH)
- 1997 “Resistance to overland flow due to saltating sediment,” American Geophysical Union Fall Meeting, San Francisco (poster with Gary Li; presented by ADA).
- 1997 “Modeling runoff in a desert shrubland ecosystem,” Seventh Annual Friends of the Jornada Symposium, Las Cruces (with David A. Howes; presented by DAH).
- 1997 “General predictive forms of Bagnold’s bed load transport model,” Association of American Geographers Annual Meeting, Fort Worth.
- 1997 “Water, sediment, and nutrient fluxes in a desert shrubland ecosystem,” Association of American Geographers Annual Meeting, Fort Worth (with David A. Howes; presented by DAH).
- 1997 “Runoff losses of nitrogen and phosphorus from grassland and shrubland plots in the Chihuahuan Desert of New Mexico,” Annual Meeting of the Ecological Society of America, Albuquerque (with W.H. Schlesinger; presented by WHS).
- 1996 “Predicting sediment transport capacity of interrill overland flow on rough surfaces,” British Geomorphological Research Group Annual Conference, Bristol (with G. Li, C. Krishnan, and J.F. Atkinson; presented by ADA).



- 1996 “Runoff and erosion on semiarid hillslopes,” British Geomorphological Research Group Annual Conference, Bristol (with A.J. Parsons and J. Wainwright; presented by JW).
- 1996 “Runon infiltration on a semiarid grassland hillslope, southern Arizona,” Annual Meeting of the Association of American Geographers, Charlotte (with David A. Howes; presented by ADA).
- 1995 “A sediment transport equation for overland flow on irregular surfaces,” Annual Meeting of the Association of American Geographers, Chicago (with J.F. Atkinson, C. Krishnan, and G. Li; presented by ADA).
- 1995 “The determination of the mean velocity of overland flow,” Annual Meeting of the Association of American Geographers, Chicago (with G. Li; presented by GL).
- 1995 “Effects of vegetation change on interrill runoff and erosion, Walnut Gulch, southern Arizona,” 26th Binghamton Geomorphology Symposium, Charlottesville, Virginia (with A.J. Parsons and J. Wainwright; presented by ADA).
- 1995 “A sediment transport capacity equation for interrill overland flow on rough surfaces,” American Geophysical Union Fall Meeting, San Francisco (with G. Li, C. Krishnan, and J.F. Atkinson; presented by ADA).
- 1995 “Sediment transport by overland flow on rough surfaces: a flume study,” The Gilbert Club West, University of California at Berkeley (with G. Li., C. Krishnan, and J.F. Atkinson; presented by ADA).
- 1994 “Laboratory experiments on sediment transport by overland flow on irregular beds,” Annual Meeting of the Association of American Geographers, San Francisco (with J.F. Atkinson; presented by ADA).
- 1994 “Step-pool streams: An adjustment to maximum flow resistance,” 1994 National Conference on Hydraulic Engineering, Buffalo (with J.F. Atkinson; presented by ADA).
- 1994 “Resistance to overland flow on semiarid shrubland and grassland hillslopes, Walnut Gulch,” Water Research and Management in Semiarid Environments: An International Symposium. Tucson (with A.J. Parsons and J. Wainwright; presented by ADA).
- 1993 “Change in overland flow hydraulics accompanying the transformation of grassland to shrubland, Walnut Gulch, southern Arizona.” J. De Ploey Memorial Symposium on Experimental Geomorphology and Landscape Ecosystem Changes, Leuven, Belgium (with A.J. Parsons and J. Wainwright; presented by ADA).
- 1993 “Tracing sediment movement in interrill overland flow on a semi-arid grassland hillslope using magnetic susceptibility.” J. De Ploey Memorial Symposium on Experimental

- Geomorphology and Landscape Ecosystem Changes, Leuven, Belgium (with A.J. Parsons and J. Wainwright; presented by AJP)
- 1993 “Modelling differential erosion processes.” J. De Ploey Memorial Symposium on Experimental Geomorphology and Landscape Ecosystem Changes, Leuven, Belgium Poster (with J. Wainwright and A.J. Parsons; presented by JW).
- 1993 “Change in overland flow hydraulics accompanying the transformation of grassland to shrubland, Walnut Gulch, southern Arizona.” Association of American Geographers Annual Meeting, Atlanta (with A.J. Parsons; presented by ADA).
- 1993 “An experimental study of step-pools in stream channels: evidence for the maximum friction factor hypothesis.” Third International Geomorphology Conference, Hamilton, Canada (with G. Li and J. Atkinson; presented by ADA).
- 1993 “Response of interrill runoff and erosion rates to vegetation change in southern Arizona.” Third International Geomorphology Conference, Hamilton, Canada (with A.J. Parsons and J. Wainwright; presented by AJP).
- 1992 “Effects of vegetation change on hillslope hydrology and sediment transport on semi-arid piedmont hillslopes, southern Arizona.” Annual Meeting of the Association of American Geographers (with A.J. Parsons; presented by ADA).
- 1992 “Grain velocity, flow velocity, and sediment concentration in overland flow.” Conference on the Application of Geographic Information Systems to Soil Erosion Management, Taiyuan, China (with J. Atkinson, C.-J. Liou, and P.J. Mackun; presented by ADA).
- 1992 “Modeling overland flow hydrology and hydraulics on a semi-arid hillslope, southern Arizona.” Annual Conference of the Middle States Division, Association of American Geographers, Syracuse.
- 1992 “Depth distributions of interrill overland flow on semiarid hillslopes: Controls and implications for modelling.” American Geophysical Union Fall Meeting, San Francisco (presented by A.J. Parsons).
- 1992 “Resistance to interrill overland flow on shrubland and grassland semiarid hillslopes.” American Geophysical Union Fall Meeting, San Francisco (presented by A.J. Parsons).
- 1992 “Sediment transport capacity of overland flow on irregular hillslope surfaces.” Annual Meeting of the Association of American Geographers, San Diego (with J.F. Atkinson; presented by ADA).
- 1991 “Resistance to overland flow on desert pavement and its implications for sediment transport

- modeling.” Association of American Geographers Annual Meeting, Miami (with A.J. Parsons; presented by ADA).
- 1991 “Resistance to overland flow on desert pavement and its implications for sediment transport modeling.” Spring Meeting, American Geophysical Union, Baltimore (with A.J. Parsons; presented by ADA).
- 1991 "Field and laboratory experiments on resistance to interrill overland flow on semiarid hillslopes, southern Arizona." Workshop on Overland Flow Hydraulics and Erosion Mechanics, University of Keele, England (with A.J. Parsons and P.J. Hirsch; presented by ADA).
- 1991 "Field investigations of sediment removal in interrill overland flow." Workshop on Overland Flow Hydraulics and Erosion Mechanics, University of Keele, England (with A.J. Parsons; presented by ADA).
- 1991 "Resistance to overland flow on a semiarid hillslope and its implications for sediment transport modeling." IGU Commission on Measurement, Theory, and Application in Geomorphology Workshop on Denudation Processes and Land Use Problems in Tropical Regions, Nairobi, Kenya (with A.J. Parsons; presented by ADA).
- 1990 "Is the concept of detachment-limited erosion valid on semiarid hillslopes?" Annual Meeting of the Association of American Geographers, Toronto
- 1990 "Hydraulics of interrill overland flow on a semiarid hillslope, southern Arizona." American Geophysical Union Spring Meeting, Baltimore (with A.J. Parsons and S.H. Luk; presented by ADA).
- 1990 "Hydraulics and erosion mechanics of overland flow on semiarid hillslopes, southern Arizona." Gilbert Club East, Baltimore.
- 1989 "Hydraulics of interrill overland flow on a semiarid hillslope, southern Arizona." Conference on the Role of Laboratory and Field Experiments in Soil Erosion Research and Modelling of Hillslope Development, Toronto (with A.J. Parsons and S-H Luk; presented by ADA).
- 1989 "Predicting infiltration and runoff on semiarid hillslopes, southern Arizona." IGU Commission on Measurement, Theory, and Application in Geomorphology Symposium, Braunschweig, West Germany (presented by A.J. Parsons).
- 1989 "The effect of spatial variability of overland flow on the downslope pattern of soil loss on a semiarid hillslope, southern Arizona." Second International Conference on Geomorphology, Frankfurt, West Germany (with A.J. Parsons and S-H Luk; presented by ADA)
- 1989 "The hydraulics of overland flow on a semiarid hillslope." Annual Meeting of the

- Association of American Geographers, Baltimore (with A.J. Parsons and S-H Luk; presented by ADA).
- 1988 "Hydrologic and sediment responses of desert hillslopes, southern Arizona," Annual Meeting of the Association of American Geographers, Phoenix.
- 1988 "Channel network development on basaltic lava flows," American Geophysical Union Spring Meeting, Baltimore (with J. Dohrenwend; presented by ADA)
- 1988 "The relation between sediment yield and gradient on desert hillslopes, southern Arizona." 26th Congress of the International Geographical Union, Sydney, Australia.
- 1987 "Threshold relations for the transport of sediment by overland flow on desert hillslopes," Workshop on Erosion, Transport, and Deposition Processes in Semiarid and Arid Areas, Jerusalem, Israel (with A.J. Parsons and S-H Luk; presented by ADA))
- 1987 "Resistance to overland flow on desert hillslopes," Workshop on Erosion, Transport, and Depositional Processes in Semiarid and Arid Areas, Jerusalem, Israel (with A.J. Parsons and S.H. Luk; presented by AJP).
- 1987 "The competence of overland flow on desert hillslopes," Annual Meeting of the Association of American Geographers, Portland.
- 1986 "Hydraulics of overland flow on desert hillslopes," Annual Meeting of the Association of American Geographers, Minneapolis.
- 1985 "Development of tributaries of different sizes along winding streams and valleys," Annual Meeting of the Association of American Geographers, Detroit.
- 1985 "Channel network topology: regular or random?" 1st International Conference on Geomorphology, Manchester, England.
- 1984 "The formation of hillslopes in the Mojave Desert, California," Annual Meeting of the Association of American Geographers, Washington.
- 1984 "Hydraulic processes in the formation of debris slopes in the Mojave Desert, California," 25th International Geographical Congress, Paris, France (with A.J. Parsons; presented by ADA).
- 1983 "The role of hydraulic processes in the formation of debris slopes in the western Mojave Desert," Annual Meeting of the Association of American Geographers, Denver.
- 1983 "Tributary development along winding streams," Annual Meeting of the Canadian Association of Geographers, Winnipeg.

- 1983 "Tributary development along winding streams," Annual Meeting of the Geological Society of America, Indianapolis.
- 1983 "Tributary development along winding streams," Meeting on Channel Networks, Buffalo.
- 1982 "Topological properties of main streams," Annual Meeting of the Association of American Geographers, San Antonio.
- 1981 "The mixed-gamma model for channel link lengths," Annual Meetings of the Canadian Association of Geographers, Ontario Division, and the Association of American Geographers, East Lakes Division, London, Ontario.
- 1981 "The mixed-gamma model for channel link lengths," Annual Meeting of the Association of American Geographers, Los Angeles.
- 1981 "The topological properties of trellis channel networks," Annual Meeting of the Canadian Association of Geographers, Corner Brook, Newfoundland.
- 1981 "Tributary arrangements in trellis channel networks," Annual Meeting of the Geological Society of America, Cincinnati.
- 1980 "A multivariate model for chain lengths in natural channel networks," Annual Meeting of the Association of American Geographers, Louisville.
- 1979 "Divide angles: a control of interior link lengths in natural channel networks," Meeting on Drainage Basin Morphometry, Buffalo.
- 1979 "Divide angles: a control of interior link lengths in natural channel networks," Annual Meeting of the Association of American Geographers, Philadelphia.
- 1976 "The factor of relief in the evolution of channel networks in mature drainage basins," 23rd International Geographical Congress, Moscow.
- 1975 "The frequency of tributary-source links in natural channel networks," Annual Meeting of the Institute of Australian Geographers, Wollongong.

#### Invited Presentations

- 2002 "Sediment transport model for turbulent flow on hillslopes and in channels." University of Sydney, Australia.

- 2001 "A sediment transport equation for turbulent flow on hillslopes and in channels." Duke University.
- 2000 "Sediment transport on hillslopes and in channels," University of Guelph, Canada
- 1995 "Effects of vegetation change on interrill runoff and erosion, southern Arizona", University of Guelph, Canada.
- 1995 "Sediment transport capacity equation for interrill overland flow on rough surfaces", University of Guelph, Canada.
- 1994 "Overland flow hydraulics and sediment transport on semiarid hillslopes." Johns Hopkins University.
- 1993 "Hydraulic processes on semiarid hillslopes, southern Arizona." University of Western Ontario, Canada
- 1993 "Overland flow hydraulics and sediment transport on semiarid hillslopes." Department of Geology, SUNY-Buffalo.
- 1992 "Overland flow and sediment transport in interrill areas on semiarid hillslopes, southern Arizona," Chinese Academy of Sciences, Institute of Geography, Beijing, China.
- 1992 "Overland flow hydraulics and sediment transport on semiarid hillslopes, southern Arizona." University of Guelph, Canada.
- 1990 "Overland flow on desert hillslopes," Catholic University of Leuven, Belgium.
- 1990 "Sediment transport on desert hillslopes," Catholic University of Leuven, Belgium.
- 1989 "Hydraulics and erosion mechanics of overland flow on a semiarid hillslope, southern Arizona," University of Wisconsin.
- 1989 "Hydraulics and erosion mechanics of overland flow on a semiarid hillslope, southern Arizona," Griffith Taylor Lecture, University of Toronto.
- 1987 "Runoff and erosion on desert hillslopes, southern Arizona," University of Arizona.
- 1987 "Hydraulic and sediment transport processes on desert hillslopes, southern Arizona," Arizona State University.
- 1987 Short Course (4 Lectures) on "Channel Networks," Arizona State University.
- 1985 "Field study of overland flow on desert hillslopes," Agricultural Research Service, Tucson.

- 1985 "Recent developments in the study of channel networks," Wilfrid Laurier University, Waterloo, Canada.
- 1984 "Tributary development along winding streams and valleys," Hebrew University of Jerusalem, Israel.
- 1984 "Recent developments in the study of channel networks," Ben-Gurion University of the Negev, Beer Sheva, Israel.
- 1984 "Mountain mass denudation and piedmont development in the American Southwest," Ben-Gurion University of the Negev, Beer Sheva, Israel.
- 1984 "Recent developments in the study of channel networks," University of Haifa, Israel.
- 1982 "Tributary development along main streams," University of California, Los Angeles.
- 1976 "The factor of relief in the evolution of channel networks in mature landscapes," University of St. Andrews, Scotland.
- 1976 "The distribution of link lengths in natural channel networks," University of Exeter, England.
- 1976 "The factor of relief in the evolution of channel networks in mature landscapes," University of Exeter, England.
- 1976 "The factor of relief in the evolution of channel networks in mature landscapes," University of Southampton, England.

#### Grants Received

- 2000 National Science Foundation: \$82,954 for "Jornada Basin LTER IV: Linkages in Semi-Arid Landscapes."
- 2000 NYS/UUP Individual Development Award: \$350 to attend the Annual Meeting of the British Geomorphological Research Group, Hull, UK.
- 1999 NYS/UUP Individual Development Award: \$1000 to attend the International Conference on Drainage Basin Dynamics and Morphology, Jerusalem, Israel.
- 1998 NYS/UUP Continuing Faculty Development Award: \$1000 to attend the Workshop on Field Experimentation: Impact of Global Change on Semiarid Erosion Processes, Almeria, Spain.

- 1997 Environmental Protection Agency: \$174,906 for “Experimental Study of Overland Transport of Cryptosporidium Parvum Oocysts” with J.F. Atkinson.
- 1997 National Science Foundation: \$5,750 under the Research Experience for Undergraduates program
- 1996 National Science Foundation: \$39,993 for “Modeling water, sediment, and nutrient fluxes in a desert shrubland ecosystem.”
- 1996 National Science Foundation: \$6,018 for “Sediment transport by laminar overland flow.” Doctoral Dissertation Improvement grant to Gang Li.
- 1996 National Science Foundation: \$5,750 under the Research Experience for Undergraduates program.
- 1995 NYS/UUP Continuing Faculty Development Award: \$750 for "The development of desert pavement."
- 1995 National Science Foundation: \$3,333 under the Research Experience for Undergraduates program.
- 1994 NYS/UUP Continuing Faculty Development Award: \$500 to attend the Annual Meeting of the Association of American Geographers, San Francisco.
- 1994 National Science Foundation: \$337,033 for "Hydrological modeling of the Jornada Basin."
- 1993 NYS/UUP Continuing Faculty Development Award: \$750 to attend the Jan De Ploey Memorial Symposium, Leuven, Belgium
- 1992 National Science Foundation: \$103,063 for "Sediment transport by overland flow on irregular hillslope surfaces.
- 1992 NATO Grant for International Collaboration in Research: \$7,000 for "Evolution and seasonal changes of desert pavement." (with A.J. Parsons and J.R. Simanton).
- 1991 U.S. Geological Survey: \$16,000 for "Investigation of vegetative controls of sediment yield in the United States." Collaborative Agreement to support dissertation research of Mark MacLennan.
- 1990 New York State/United University Professions Professional Development and Quality of Working Life Committee Experienced Faculty Travel Award: \$500 to attend the Second International Conference on Geomorphology, Frankfurt, West Germany.



- 1990 National Science Foundation: \$5,000 for "The shape and spatial variation of velocity profiles in natural streams with coarse bed material." Doctoral Dissertation Improvement Research Grant to Normand Bergeron.
- 1989 NATO Grant for International Collaboration in Research: \$6,000 for "Hydraulic Processes in the Formation of Desert Debris Slopes. Part 3" (with A.J. Parsons and S.H. Luk).
- 1988 National Science Foundation: \$67,448 for "Interrill Erosion on Desert Hillslopes, Southern Arizona."
- 1988 U.S. National Committee/International Geographical Union - Association of American Geographers: \$1000 travel grant to attend the 26th Congress of the International Geographical Union, Sydney, Australia.
- 1987 NATO Grant for International Collaboration in Research: \$6,000 for "Hydraulic Processes in the Formation of Desert Debris Slopes. Part 2" (with A.J. Parsons and S.-H. Luk).
- 1987 New York State/United University Professions Professional Development and Quality of Working Life Committee Experienced Faculty Travel Award: \$500 to attend the Workshop on Erosion, Transport, and Deposition in Semiarid and Arid Areas, Jerusalem, Israel.
- 1986 National Science Foundation: \$13,556 for "A Laboratory Study of the Hydraulics of Overland Flow on Desert Hillslopes." Doctoral Dissertation Improvement Research Grant to Paul J. Hirsch.
- 1986 SUNY-Buffalo Research Development Fund: \$2,213 for "Hydraulic Processes on a Desert Hillslope: A Field Experiment."
- 1985 Geological Society of America: Gladys W. Cole Research Award of \$1,800 for "Controls of rock slope form in the Mojave Desert."
- 1985 SUNY-Buffalo Experienced Faculty Travel Award: \$393 travel grant to attend the First International Conference on Geomorphology, Manchester, England.
- 1985 National Science Foundation: \$15,043 for "United States-United Kingdom Joint Symposium on Hillslope Processes."
- 1985 SUNY Conversations in the Disciplines: \$2,500 for "Geomorphology Symposium on Hillslope Processes."
- 1985 SUNY-Buffalo Conferences in the Disciplines: \$2,000 for "Geomorphology Symposium on Hillslope Processes."
- 1985 NATO Grant for International Collaboration in Research: \$6,000 for "Hydraulic processes

in the formation of desert debris slopes. Part 1" (with A.J. Parsons and S.-H. Luk).

- 1984 U.S. National Committee/International Geographical Union - Association of American Geographers: \$800 travel grant to attend the 25th International Geographical Congress, Paris-Alpes.
- 1983 SUNY Research Development Funds: \$2,270 for project entitled "The role of hydraulic processes in the formation of desert hillslopes."
- 1981 SUNY Equipment Funds: \$12,000 for the purchase of field and laboratory equipment for undergraduate instruction in geomorphology.
- 1981 SUNY Research Foundation University Award: \$2,850 for project entitled "A model for stream junction angles."
- 1979 SUNY Research Foundation University Award: \$2,000 for project entitled "A multivariate approach to channel link lengths."
- 1978 SUNY-Buffalo Institutional Funds: \$750 for project on "The effect of link interactions on interior channel link lengths."
- 1977 Australian Research Grants Committee: \$700 for project on "The properties of interior link lengths in natural channel networks."
- 1972 Environment Canada: \$7,000 for project entitled "The possibilities for using suspended sediment curves in the Canadian Sediment Survey Program," R. Kellerhals, project supervisor.
- 1971 Water Resources Council of Alberta: \$14,000 for project entitled "Sediment yields in southern Alberta," H.J. McPherson, project supervisor.

### Teaching Experience

1977- 2003 State University of New York at Buffalo

#### Undergraduate Courses:

Introduction to Physical Geography  
Water, Man, and Environment  
Fluvial Geomorphology  
Landform Field and Laboratory Techniques  
Climatic Geomorphology

#### Graduate Courses:

Fluvial Processes

Drainage Basin Form and Process  
Topics in Landform Analysis  
Landform Development

Graduate Student Supervision:

Master's Committees Chaired or Co-Chaired: 13

Degrees completed: 13: S. Heisel, J. Ponczynski, M. O'Neill,  
J. Updegraph, R. Andrle, S. Siegfried, C. Krishnan (Eng.), A. Klawitter  
(Eng.), U. Vegesna (Eng.), A. Burtless, F. Aebly, A. Endres, Emily  
O'Mahony (Geol)

Doctoral Committees Chaired: 11.

Degrees completed: 11. M. O'Neill, R. Andrle, N. Bergeron, P. Hirsch,  
G. Li, M. Neave, D. Howes, Peng Gao, Shixiong Hu, Aleksey Naumov,  
Scott Rayburg

Ph.D. External Examiner: K. Brown, Monash University, Australia  
T. Zhu, University of Toronto, Canada

1973-1977 University of New South Wales

Applied Physical Geography (Geomorphology component)  
Physical Geography for Landscape Architects (Geomorphology component)  
Geomorphology  
Advanced Introduction to Marine Science (Coastal Geomorphology  
component)  
Terrain Engineering (Geomorphology component)

1972 University of Alberta

Introduction to Physical Geography

Administrative Experience

1997-01 Graduate Committee, Department of Geography, SUNY-Buffalo

1990-91 Member, College Curriculum Committee and Chairs Joint Task Force to  
Implement the Undergraduate College Proposal, SUNY- Buffalo

1989-91 Member, Advisory Board, National Center for Geographic Information and  
Analysis at SUNY-Buffalo

1988-91 Chair, Department of Geography, SUNY-Buffalo

- 1987-88 Faculty of Social Sciences Personnel Committee, SUNY-Buffalo
- 1986-88 Department of Geography Graduate Committee, SUNY-Buffalo
- 1986-88 Department of Geography Senior Paper Award Committee, SUNY-Buffalo
- 1986 Chair, Department of Geography Task Force on Hiring Priorities, SUNY-Buffalo
- 1985 Chair, Department of Geography Task Force on Graduate Student Recruitment and Retention, SUNY-Buffalo
- 1983-88 Associate Chairman, Department of Geography, SUNY-Buffalo
- 1982-1983 Faculty Senate, SUNY-Buffalo
- 1981-1982 Faculty of Social Sciences Policy Committee, SUNY-Buffalo
- 1979 Faculty of Social Sciences Grievance Committee, SUNY-Buffalo
- 1978-1982 Department of Geography Graduate Committee, SUNY-Buffalo
- 1977 Board of Science and Mathematics, University of New South Wales.
- 1976-1977 Committee to Advise on Establishment of Marine Science Program, University of New South Wales
- 1975-1977 Institute of Marine Science Management Committee, University of New South Wales

Professional Service: Editing

- 2000-01 Associate Editor, **Water Resources Research**
- 1998-2000 Editorial Board, **Dictionary of Physical Geography**
- 1994 Editor of a special issue of **Geomorphology** (v. 9, no. 3) on Steepland Geomorphology.
- 1993 Co-Editor of a special issue of **Physical Geography** (v. 14, no. 3) on Drainage Basin Sediment Budgets.
- 1991- Member of the Editorial Board of **Geographical Analysis**.

- 1990-92 Associate Editor, **Geographical Snapshots of North America**.
- 1983 Director of a special issue of the **Annals of the Association of American Geographers** on Polar Physical Geography
- 1982-87 Associate Editor, **Annals of the Association of American Geographers**

Professional Service: Offices

- 1992-2000 Full member, Commission on Geomorphological Response to Environmental Change, International Geographical Union.
- 1992 Member, Geological Society of America Mackin Grant Committee
- 1991-94 Member and Chair, Geomorphology Specialty Group Awards Committee, Association of American Geographers.
- 1990-93 Member, Field Trips Committee, Third International Conference on Geomorphology.
- 1988-89 Panel on Earth Surface Processes, National Academy of Science-National Research Council Committee on Solid Earth Sciences.
- 1988-92 Full member, Commission on Measurement, Theory, and Application of Geomorphology, International Geographical Union.
- 1985-87 United States Corresponding Member to the informal International Geomorphology Organization.
- 1985-90 Chair, Association of American Geographers "Survey and Synthesis" Task Force.
- 1984-85 Chair, Geomorphology Specialty Group of the Association of American Geographers.
- 1983-84 Secretary-Treasurer, Geomorphology Specialty Group of the Association of American Geographers.
- 1983-92 Member, Steering Committee, Annual Geomorphology Symposia

Professional Service: Conferences and Workshops

Co-organized symposium on "Sediment Budgets" at the Third International Geomorphology Conference, Hamilton, Canada, 1993. The proceedings, which I co-edited, were published as a special issue of Physical Geography.

Organized Field Symposium in 1992 on "Steepland Geomorphology" for the Commission on Measurement, Theory, and Application in Geomorphology, International Geographical Union. The proceedings, which I edited, were published as a special issue of Geomorphology.

Co-organized Workshop on "Overland Flow Hydraulics and Erosion Mechanics", University of Keele, England, 1991. The proceedings of the workshop, which I coedited, were published by UCL Press.

Co-organized 22nd Annual Geomorphology Symposium on "Periglacial Geomorphology" at SUNY-Buffalo, 1991. The proceedings of the symposium, which I coedited, were published by John Wiley & Sons.

Organized 16th Annual Geomorphology Symposium on "Hillslope Processes" at SUNY-Buffalo, 1985. The proceedings of this symposium, which I edited, were published by Allen & Unwin.

Organized Meeting on Drainage Basin Morphometry, SUNY-Buffalo, 1979

1994 Co-Chaired session on "Mountain Rivers -- Applied Hydraulic Analyses I" at the 1994 National Conference on Hydraulic Engineering, Buffalo.

1993 Chaired session on "Desert Geomorphology" at the Annual Meeting of the Association of American Geographers, Atlanta.

1990 Organized session on "Hillslope Processes" at the Annual Meeting of the Association of American Geographers, Toronto.

1990 Chaired session on "Modelling of Geomorphic Processes" at the Annual Meeting of the Association of American Geographers, Toronto.

1989 Organized two sessions on "Desert Geomorphology" at the Annual Meeting of the Association of American Geographers, Baltimore.

1989 Chaired session on "Desert Geomorphology II" at the Annual Meeting of the Association of American Geographers, Baltimore.

1989 Participant in "Workshop on Arid Ecosystems Interactions" organized by University Corporation for Atmospheric Research, Boulder.

1988 Organized three sessions on "Desert Geomorphology" at the Annual Meeting of the Association of American Geographers, Phoenix.

1988 Chaired session on "Desert Geomorphology III" at the Annual Meeting of the Association of American Geographers, Phoenix.

- 1987 Chaired a session at the Workshop on Erosion, Transport, and Deposition Processes in Semiarid and Arid Areas, Jerusalem, Israel.
- 1987 Chaired session on "Geomorphology Channels" at the Annual Meeting of the Association of American Geographers, Portland.
- 1987 Panel member in panel discussion of "Research Strategies for the Study of Process-Form Relations," Annual Meeting of the Association of American Geographers, Portland.
- 1986 Chaired session on "Geomorphic Debris, Degradation, and Deposition" at the Annual Meeting of the Association of American Geographers, Minneapolis.
- 1986 Chaired session at 17th Annual Geomorphology Symposium on Aeolian Geomorphology, Guelph, Ontario
- 1985 Organized session on "Channel Networks" at the Annual Meeting of the Association of American Geographers, Detroit.
- 1985 Chaired session on "Theoretical Geomorphology" at the First International Conference on Geomorphology, Manchester, England.
- 1983 Chaired session on "Fluvial Process" at the Annual Meeting of the Association of American Geographers, Denver.
- 1982 Organized session on "Quantitative Fluvial Geomorphology" at the Annual Meeting of the Association of American Geographers, San Antonio.
- 1980 Chaired session on "Fluvial Processes II" at the Annual Meeting of the Association of American Geographers, Louisville.
- 1979 Chaired session on "Drainage Basin Morphometry" at the Annual Meeting of the Association of American Geographers, Philadelphia.

Professional Affiliations at Retirement

Association of American Geographers  
 American Geophysical Union  
 British Society for Geomorphology (formerly the British Geomorphological Research Group)