

CURRICULUM VITAE – Victor R. Baker
Abbreviated Version – 41 pages (The Complete CV is 132 pages)
July 2020

PERSONAL DATA

Current Positions **Regents Professor**, Department of **Hydrology and Atmospheric Sciences; Professor of Planetary Sciences; Professor of Geosciences, and Professor in The Lunar and Planetary Laboratory**; also Professor in the Global Change and in the Remote Sensing and Spatial Analysis Graduate Interdisciplinary Programs, **The University of Arizona**

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Family Information Married to Pauline M. (Heaton) Baker
Children: Trent, Theodore

FORMAL EDUCATION

Heidelberg American High School, Heidelberg, Germany (graduated 1963)
Rensselaer Polytechnic Institute, Troy, New York: B.S., 1967, Geology
University of Colorado, Boulder, Colorado: Ph.D., 1971, Geology

ACADEMIC AND PROFESSIONAL POSITIONS

1996-Present **Regents' Professor** of Hydrology and Water Resources (now **Hydrology and Atmospheric Sciences**), Geosciences, and Planetary Sciences, The University of Arizona.

2012 Visiting Professor in the Fredy and Nadin Hermann Institute of Earth Sciences, Hebrew University of Jerusalem, Israel

1996-2004 **Head, Department of Hydrology and Water Resources**, The University of Arizona

2002-2012 Adjunct Professor, Centre for Geoscience and Engineering, Anna University, Chennai (Madras), India

1988-Present **Regents' Professor, The University of Arizona**

1994-1995 Visiting Fellow, Udall Center for Studies in Public Policy, The University of Arizona

1988 Visiting Research Fellow, Department of Geology and Geophysics, The University of Adelaide, South Australia

1987-1988 Visiting Research Fellow, National Institute of Hydrology, Roorkee, India

1987-1988 Visiting Research Fellow, Department of Archaeology, Deccan College, Pune, India

1982-Present Joint Appointment as **Professor of Planetary Sciences/Lunar and Planetary Laboratory, The University of Arizona**

1981-Present **Professor of Geosciences, The University of Arizona**

1979-1980 Visiting Fellow, The Australian National University (Fulbright-Hays Senior Research Scholar)

1976-1981 Associate Professor to Professor, Department of Geological Sciences, The University of Texas at Austin

1973 Research Scientist, Bureau of Economic Geology, The University of Texas at Austin

1971-1976 Assistant Professor, Department of Geological Sciences, The University of Texas at Austin

1969-1971 City Geologist, City of Boulder, Colorado

1967-1969 Geophysicist, U.S. Geological Survey, AEC Hydrology Group, Denver, Colorado

1967 Geophysicist, U.S. Geological Survey, Water Resources Division, Albany, New York

1966-1967 Hydrological Field Assistant, U.S. Geological Survey, Water Resources Division, Albany, New York

1965-1966 Research Assistant in Sedimentology, Department of Geology, Rensselaer Polytechnic Institute, Troy, New York

HONORS AND AWARDS

2019 Recognized as an American Association for the Advancement of Science Lifetime Member (based on 50 years of membership)
Invited “Luminary Speaker,” Prognostics and Health Management Annual Conference, Scottsdale, Arizona, September 25
Invited keynote speaker, 50th Annual Meeting, Binghamton Geomorphology Symposium, Denver Colorado, October 12

2018 50-Year Fellow recognition, The Geological Society of America
50-Year Fellow recognition, American Geophysical Union

2017 Invited Keynote Speaker for The Geological Society (London), Conference “The Evolution of Flooding and Flood Risk: Past, Present and Future”
Burlington House, London, U.K., September 14-15
Invited Keynote Lecturer for The Geological Society of America Rocky Mountain Section Meeting, Calgary, Alberta, Canada, June 9-10
Article (Rodriguez et al., 2016) “Tsunami Waves Extensively Resurfaced Shorelines of an Early Mars Ocean” recognized as one of the top *Scientific Reports* articles of 2016 (of the 20,000 articles published that year)

2015 Awarded Outstanding Reviewer Status for the journal *Geomorphology*

2014 Harold McMaster Visiting Scientist, Bowling Green State University
Certificate of “Excellence in Reviewing” for the journal *Planetary and Space Science*

2013 Invited Lecturer, Accademia Nazionale dei Lincei, Classe di Scienze Fisiche,

- Matematiche e Naturali, Palazzo Corsini, Rome, Italy
- 2012-2013 Named an **Inaugural Fellow, British Society for Geomorphology (FBSG)**
Inaugural GSA Distinguished International Lecturer, The Geological Society of America
- 2011 John T. Loucks Distinguished Lecturer, Western South Dakota Hydrology Conference, Rapid City, South Dakota
Sensors Best Paper Awards, 3rd Prize for Denlin et al. (2005) - listed below.
- 2010 **Distinguished Career Award**, The Geological Society of America, Quaternary Geology and Geomorphology Division
- 2008 Inaugural David L. Weide Lecturer, University of Nevada Las Vegas
- 2007 **NASA Group Achievement Award** to the Earth Observing One Sensor-web Team. The certificate reads: “for outstanding achievement in the development of an operational 24/7 autonomous Earth Observing Sensor-web, integrating multiple space and ground sensors.”
- 2005 **NASA Group Achievement Award** to the Autonomous Science-craft Experiment team (I was a team member). The certificate reads: “for outstanding accomplishments in demonstrating, as part of the Earth Observing-1 mission, the potential for space missions to increase total engineering and science data return by using spacecraft autonomous decision making.”
NASA Software of the Year Award, Certificate of Recognition “presented to Victor R. Baker, for the creative development of exceptional scientific and technical contributions which have determined to be of significant value in the advancement of the aerospace technology program of NASA, entitled The Autonomous Sciencecraft Experiment,” September 6, 2005.
- 2003 Barringer Lecturer, University of Arkansas, Fayetteville, Arkansas
- 2003 Visiting Scientist, American Academy in Rome (Italy)
- 2002 University Distinguished Lecturer, Trinity University, San Antonio, Texas
International Hydrological Decade Endowment Lecturer, Anna University, Chennai, India
Don J. Easterbrook **Distinguished Scientist Award of The Geological Society of America** (awarded “to an individual who has shown unusual excellence in published research that has substantially increased knowledge in Quaternary geology and geomorphology”)
- 2001 International Water and Science Award (“Gran Prix International de Cannes de l’Eau et de la Science”), presented at the European Union Third International Symposium on Water)
- 2000 Elected Fellow, Arizona/Nevada Academy of Sciences
- 1999 Elected **Honorary Fellow, European Union of Geosciences (EUG), now the European Geosciences Union (EGU)**
Wreford Watson Lecturer, University of Edinburgh
Caswell Silver Lecturer, University of New Mexico
- 1998 Elected **Fellow, American Geophysical Union**
Honorary West Virginian Award conferred by the governor of West Virginia
- 1995 Distinguished Bartle Lecturer, Binghamton University
David Linton Award, British Society for Geomorphology, given for “a continuing major contribution to the science of geomorphology”

- 1994 Institute for the Study of Planet Earth Fellow, Udall Center for Studies in Public Policy
Elected **Foreign Member of the Polish Academy of Sciences**
- 1992 **NASA Group Achievement Award** for the Magellan Science Group to Victor R. Baker in recognition of outstanding achievement in performing the various science tasks that have been a major part of the successful Magellan mission.
- 1989 Elected **Fellow, American Association for the Advancement of Science**
- 1988 **Regents' Professorship, The University of Arizona**
- 1987-1988 **Indo-American Fellowship** (Awarded by the American Secretariat of the Indo-U.S. Subcommission on Education and Culture for a 2-month Project "Paleoflood Hydrology and the Indian Monsoon")
- 1979-1980 **Fulbright-Hays Senior Research Scholar** (Awarded for Research on Australian Paleofloods as a Visiting Research Fellow, The Australian National University)
- 1976 Elected **Fellow, The Geological Society of America**
- 1967-1970 National Defense Education Act Fellowship
- 1967 U.S. Army ROTC Distinguished Military Graduate and American Legion Gold Award for Military Excellence (served 1967-1975 U.S. Army Reserve to Rank of Captain)

NATIONAL ADVISORY COMMITTEES, PANELS, STUDY GROUPS

National Research Council

- 2014-2015 Committee to Review the Mars Exploration Program Analysis Group (MEGAG) Report for Mars Special Regions, Space Sciences Board
- 2010-2011 **Chair**, Planning Committee on Research and Application Needs in Flood Hydrology Science, Water Science and Technology Board
- 2002-2011 Committee on Hydrologic Sciences, Water Science and Technology Board
- 1997-2000 Water Science and Technology Board, Committee on USGS Water Resources Research
- 1995-1996 Board on Radioactive Waste Management's Committee for Yucca Mountain Peer Review: Surface Characteristics, Preclosure Hydrology, and Erosion
- 1995-1996 Committee on Alluvial Fan Flooding, Water Science and Technology Board
- 1990-1992 Panel on Scientific Responsibility and the Conduct of Research, Committee on Science, Engineering, and Public Policy
- 1990-1992 Committee on Global Change, Working Group on "Solid Earth Processes
- 1988-1992 Panel on Global Surficial Geofluxes, Geophysics Study Committee, Geophysics Research Board
- 1983-1996 United States National Committee for the International Union or Quaternary Research (INQUA); Vice-Chairman of Committee, 1987-1991; **Chairman of Committee, 1991-1996**
- 1986-1988 Committee on Glen Canyon Environmental Studies Review, Water Science and Technology Board
- 1985-1987 Committee on Techniques for Estimating Probabilities of Extreme Floods, Water Science and Technology Board

- 1983-1984 Committee on Natural Disasters, Member of Special Team to Conduct On-Site Study and Prepare Report on Tucson Flood of October, 1983 (Commission on Engineering and Technical Systems)
- 1981-1984 Space Sciences Board, Committee on Earth Sciences, Space Science Board
1981 Geological Sciences Board Workshop, "Geology 2020, Forecasting the Next Chapter in the History of Mankind's Exploration and Exploitation of the Earth"
- 1978-1981 Panel on Scientific Basis of Water-Resource Management, Geophysics Research Board

National Science Foundation

- 1998-1999 GEO 2000, Hydrology Subcommittee Member
1993-1996 Hydrologic Sciences Working Group, Hydrologic Sciences Program

National Aeronautics and Space Administration

- 2004-2010 Gamma Ray Spectrometer Team (Adjunct Member), Mars Odyssey Mission
2000-2002 Solid Earth Sciences Working Group (Advisory to Associate Administrator for Earth Science)
- 1992-1994 Planetary Geology and Geophysics Management and Operations Working Group (Advisory to Planetary Geology and Geophysics Program)
- 1988-1989 Organizing Committee, Fourth International Conference on Mars
1985-1988 Member, Science Working Group, NASA Global Topographic Mapping Experiment
- 1984-1986 Mars Volatile Evolution and Climate History Working Group
1983-1994 Radar Investigation Group (RADIG) for the Magellan Space Mission to Venus
- 1982-1984 Planetary Geology and Geophysics Working Group (Advisory to Planetary Geology and Geophysics Program)
- 1982 Steering Committee for the new Research Initiative tentatively titled "Global Change: Impacts on Habitability"
- 1980-1982 VOIR Synthetic Aperture Radar Investigation Group
1978-1988 Chairman, Mars Channel Working Group, Planetary Geology and Geophysics Program
- 1977-1979 Orbital Imaging Team of the Viking Space Program (Guest Investigator)
1978 Leader, Comparative Planetary Geology Field Conference on the Channeled Scabland, Planetary Geology Program

Council for International Exchange of Scholars

- 1982-1985 Advisory Screening Committee for Fulbright Senior Scholar Awards in Geology. **Chairman of Committee** 1983-1985

U.S. Department of Energy

- 1991-1992 Markers Panel, Waste Isolation Pilot Plant (WIPP), Sandia National Laboratory
- 1987 Peer Review Panel for Proposed Research on Calcite/Opaline Silica Deposits in Relation to the Nevada Nuclear Waste Storage Investigations
- 1986 Peer Review Panel for Hydraulics and Ecology of Disturbed Arid Landscapes, U.S. Department of Energy
- 1983-1989 Peer Review Panel for the Salt Host-Rock Portion of the U.S. National Waste Terminal Storage Program

U.S. Department of the Interior

- 1998-2000 Grand Canyon Monitoring and Research Center, Sediment Studies Peer-Review Panel

Universities Space Research Association - Lunar and Planetary Institute

- 2017 Convener, Fourth International Conference on Early Mars
- 2004 Organizing Committee, Second International Conference on Early Mars
- 1986 Organizing Committee, Symposium on Mars: Evolution of its Climate and Atmosphere
- 1985 Mars Observer Proposal Review Panel
- 1983-1985 Planetary Geology and Geophysics Review Panel
- 1983-1985 Mars Data Analysis Program Review Panel

INTERNATIONAL COMMITTEES

International Association of Geomorphologists

- 2014-2017 Member of the Scientific Committee for the 9th International Conference of the Association, New Delhi, India, 2017
- 2014-2015 Member of the International Scientific Committee for the Regional Conference, "Gradualism vs. Catastrophism in Landscape Evolution," Barnaul, Russia, July 2-4, 2015
- 2011-2013 Member of the Scientific Committee for the 8th International Conference on Geomorphology, Paris, 2013
- 2006-2012 **Chair, Planetary Geomorphology Working Group**
- 1993-1997 **Treasurer** of the Association
- 1989-1997 Member of the Executive Committee
- 1989-1993 Co-Chair, Program Committee, Third International Conference on Geomorphology; Member, Executive Committee, Third International Conference on Geomorphology
- 1985-1989 Advisory Associate of the Working Committee to Establish an International Association of Geomorphologists

International Union for Quaternary Research

- 2016-present Steering Committee, TERPRO Focus Group on Palaeohydrology and Fluvial Archives – Extreme and Critical Events (HEX)
- 2003-2016 Member of the Steering Committee, INQUA Terrestrial Processes Commission (TERPRO) Focus Area on Hydrological Change and Climate
- 1999-2003 Vice-President, Commission on Global Continental Paleohydrology
- 1995-1999 **President, Commission on Global Continental Paleohydrology**
- 1995 **Head, U.S. National Delegation to XIV INQUA Congress**, Berlin, Germany, August 3-10, 1995
- 1991-1995 Vice-President, Commission on Global Continental Paleohydrology
- 1991-2016 Member (from initiation to completion), Commission on Global Continental Paleohydrology
- 1991 Vice-Chairman, U.S. National Delegation to XIII INQUA Congress, Beijing, China, August 2-9, 1991
- 1987-1991 Commission of the Holocene Working Group on Global Paleohydrology

International Union of the Geological Sciences

- 2012-2014 Organizing Committee for the International Union of Geological Sciences, International Commission on the History of Geological Sciences (INHIGEO) 2014 Symposium 39 on “Doing the History of the Earth Sciences: What, Why and How?” to be held at Pacific Grove California in July 2014.
- 2012-2014 Co-Chair, Program Committee for the International Union of Geological Sciences, International Commission on the History of Geological Sciences (INHIGEO) 2014 Symposium 39 on “Doing the History of the Earth Sciences: What, Why and How?” held at Pacific Grove California in July 2014.
- 2002-2014 Member of the International Commission on the History of Geological Sciences (INHIGEO), International Union of the Geological Sciences and International Union of the History and Philosophy of Science.

PAGES (Past Global Changes)

- 2019-2022 Coordination Panel for Floods Working Group, Goal #3 – Contribution to Disaster Risk Reduction Agenda

OTHER ADVISORY COMMITTEES

- 1993-Present Advisory Board, University of Arizona Press
- 2008-2010 Member of Steering Committee, “New Directions: Science, Humanities, Policy,” a joint program of Colorado School of Mines and University of North Texas.
- 1992-1995 National Advisory Committee, Desert Research Institute, University of Nevada
- 1991-2003 Chair, NSF-Arizona Accelerator Facility for Radioisotope Analysis, Users’ Oversight Committee
- 1991-2001 Advisory Committee, Udall Center for Studies of Public Policy, University of Arizona
- 1985-1989 National Advisory Board, Department of Geological Sciences, University of

Colorado, Boulder

PROFESSIONAL SOCIETY AND EDITORIAL POSITIONS

The Geological Society of America

2018 Recognition of 50-year Membership
2017 Field Trip Co-Leader, Annual Meeting, Seattle, WA
2016 Field Trip Leader, Rocky Mountain Section Meeting, Moscow, ID
2014-2015 Member, External Awards Committee
2012-2013 **Inaugural Distinguished International Lecturer, International Division**
2008-2013 Ad Hoc Planning Committee for the 125th anniversary meeting
2011 Past Chair, History and Philosophy of Geology Division
2010 **Chair, History and Philosophy of Geology Division**
2010 Joint Technical Program Committee (2010 annual meeting)
2009 Vice-Chair, History of Geology Division
2009 Joint Technical Program Committee (2009 annual meeting)
2008 Member, Ad Hoc Committee on Innovative Science
2008 Second Vice-Chair, History of Geology Division
2006-2007 Ad Hoc Committee on Innovative Science at GSA Meetings
2004 Special Ad Hoc Panel on Geoscientists and Natural Hazards
2002-2005 Committee on the Young Scientist Award (Donath Medal)
2000 Ad Hoc Member, GSA Foundation Board of Trustees
1999 Past-President of the Society
1998 **President of the Society**
1997 Vice-President of the Society
1996-1999 Executive Committee and Long-Range Planning Committee
1996-1999 **Council Member**
1996-1997 Member, Committee on Education
1994-1999 Member, Long-range Planning Committee, Quaternary Geology and
Geomorphology Division
1993-1995 Member, Planetary Geology Division Gilbert Award Committee
1993 Chairman, Committee on the Penrose Medal
1993 Chairman, External Awards Committee
1990-1993 **Councilor**
1987 **Chair, Quaternary Geology and Geomorphology Division**
1986 **Chair, Planetary Geology Division**
1980-1982 Member, Committee on Geology and Public Policy
1977-1978 Flood Hazards Panel, Committee on Environment and Public Policy
1976-1978 Panel of the Quaternary Geology and Geomorphology Division and
Subcommittee to Select the Kirk Bryan Award Recipient
1976 Elected **Fellow of the Society**
1975-1982 Editorial Board, *Geology* (journal of the society)

American Association for the Advancement of Science

2019- Awarded Lifetime Member Status
2009-2010 **Councilor**
2008-2009 **Chair of the Section on Geology and Geography** (second time)
2007-2008 **Chair-Elect** for the Section on Geology and Geography (Section E)
1993-1994 **Councilor**
1992-1993 **Chair of the Section on Geology and Geography**
1989 Elected **Fellow of the Association**

American Geophysical Union

2018 Recognition of 50-year Membership
2017 Panelist, “The Great Debate” Panel at Annual Meeting
2009-2013 Member, Advisory Board for the AGU Natural Hazards Focus Group
2000-2001 Chair, Hydrology Section Award Committee
1998-2000 Member of the Hydrology Section Executive Committee
 Member of the Hydrology Section Award Committee
1998 Elected **Fellow of the Union**
1996-1997 Member, Robert E. Horton Medal Committee
1989-1991 Associate Editor, *Journal of Geophysical Research* (Solid Earth and Planets)

History of Earth Sciences Society

2015-2016 **Councilor**
2002-2013 **Book Review Editor**, *Earth Sciences History* (journal of the society)

British Geomorphological Society

2013- present President’s Advisory Group
2013 **Inaugural Fellow of the Society**

EDITORIAL BOARD MEMBERSHIPS

2012-Present Editorial Board for the journal *Geography and Environmental Hazards*
 (published by Ferdowsi University of Mashad, Iran)
2006-2010 Editorial Advisory Board of *Bollettino della Società Geologica Italiana*
2002-2013 **Book Review Editor**, *Earth Sciences History*
2002-2006 Editorial Board, *Canadian Geographer*
2000-2004 Editorial and Advisory Board, *Studia Quaternaria*
1993-Present **Editorial Board**, *Zeitschrift für Geomorphologie*
1989-2000 Governing Board for the journal *Radiocarbon*
1989-1991 **Associate Editor**, *Journal of Geophysical Research* (Solid Earth and
 Planets)
1986-present **Editorial Committee of The University of Arizona Press**
1986-2019 **Editorial Board**, *Geomorphology* (Elsevier Science Publishers)
1985-1999 Advisory Board, *Springer Series in Physical Environment* (Springer-Verlag)
1975-1982 **Editorial Board**, *Geology*

PROFESSIONAL SOCIETY AFFILIATIONS

American Association for the Advancement of Science (**Lifetime Member; Fellow** since 1989)
American Geophysical Union (Member since 1968; **Fellow** since 1998)
American Quaternary Association (Charter member since its inception in 1970)
Arizona Geological Society (since 1982)
British Society for Geomorphology (Member since 1981, **Inaugural Fellow** since 2013)
C.S. Peirce Society (since 1988)
Geological Society of America (Member since 1968; **Fellow** since 1976)
History of Earth Sciences Society (since 1994)
National Speleological Society (since 1965)
Society of Sigma Xi (since election in 1967)

STUDENTS AND POSTDOCTORAL SCHOLARS

16 postdoctoral scholars supervised; 69 completed graduate degrees/theses supervised (40 M.S. and 29 Ph.D.); external examiner for 15 international Ph.D. dissertations; currently supervising one M.S. and two Ph.D. students plus one postdoc.

ABBREVIATED PUBLICATIONS LIST

Victor R. Baker

This following lists **21 scientific books/monographs**, plus **442 articles and chapters**. The Full CV (130 pages) lists **more than 1100 published contributions**, including more than **550 abstracts and short research reports**, nearly all of which are associated with papers presented at professional meetings, conferences, and workshops; 34 extended technical reports; 46 encyclopedia articles; 39 published book reviews; plus guidebook contributions and various other writings, including popular works.

- 2020 Baker, V.R., in preparation, The Oceans of Mars: The Personal History of an Outrageous Geological Hypothesis. **(Book #21)**
- Baker, V.R., in preparation, Thinking the Stone: The Slaty Cleavage Controversy and Geological Reasoning. **(Book #20)**
- Carling, P.A., **Baker, V.R.**, and Herget, J., editors, 2020, Catastrophic Freshwater Paleoflooding on Earth: A Global Perspective: Elsevier (Earth-Science Reviews Special Volume). **(Book #19)**
- Baker, V.R., 2020, Global megaflood paleohydrology, in Herget, J. and Fontana, A., editors, Palaeohydrology. Geography of the Physical Environment: Springer, Heidelberg, p. 3-28. **(442)**
- Baker, V.R., in press, Megafloods and large rivers, in Gupta, A., editor, Large Rivers: Wiley, N.Y. **(441)**
- Baker, V.R., submitted, Problems of landscape evolution in the Finke River transverse drainage of the central mountain ranges, Australia: Studia Geomorphologica Carpatho-Balcanica (SGCB) Special Issue "Landform Evolution in Mountains and Their Foreland" **(440)**

- Baker, V.R., in preparation, Peircian perspectives on the global climate change controversy, in Hermann-Pillath, C., and North, W., editors, *Semiotics and Economics*, Special Issue of *Recherches sémiotiques/Semiotic Inquiry* (RS/SI; Montreal) (439)
- Baker, V.R., 2020, The modern evolution of geomorphology: Binghamton and personal perspectives, 1970-2019 and beyond: *Geomorphology*, v. 366, 10668 DOI: <https://doi.org/10.1016/j.geomorph.2019.02.028> (438)
- Baker, V.R., and Carling, P.A., 2020, Global Late Quaternary Megafloods, in Shroder, J. (Editor in Chief), Wohl, E.E. (Ed.), *Treatise on Geomorphology*, 2nd Edition, Vol. 9, *Fluvial Geomorphology*: Elsevier, 8 p. (437)
- Baker, V.R., Liu, T., and Ji, L., in press, Global Late Quaternary Fluvial Paleohydrology: With Special Emphasis on Paleofloods, in Shroder, J. (Editor in Chief), Wohl, E.E. (Ed.), *Treatise on Geomorphology*, 2nd Edition, Vol. 9, *Fluvial Geomorphology*: Elsevier. (436)
- Baker, V.R., Liu, T., and Ji, L., submitted, Paleo- and historical flood hydrology, in Eslamian, S., editor, *2020 Flood Handbook*: Taylor and Francis. (435)
- Carling, P.A., Baker, V.R., and Herget, J., 2020, Catastrophic freshwater paleoflooding on Earth: *Earth Science Reviews*, v. 204, 103177. (434)
- Li, J., Baker, V.R., Gupta, H, Ferré, T, Liu, T., Guertin, P., in preparation, A machine-learning approach to morphometry-extreme flood links in the Lower Colorado River Basin (433)
- Liu, T. and Baker, V.R., in preparation, Nature of Channeled Scabland megaflooding in the northwestern U.S.: New insights from 2D hydraulic simulations. (432)
- Liu, T., Ji, L., Baker, V.R., Harden, T.M., and Cline, M.L., 2020, Holocene extreme paleofloods and their climatological context, upper Colorado River Basin, USA. *Progress in Physical Geography*, DOI: 10.1177/0309133320904038 (431)
- Liu, T., Baker, V.R., Huang, C.H., and Ji, L., in preparation, Paleoflood hydrology in China, a Review. (430)
- Lotsari, E., House, P.K., Alho, P., and Baker, V.R., in preparation, Comparisons of decadal fluviomorphic evolutionary trajectories of two ephemeral channels after channel-forming extraordinary floods. (429)
- O'Connor, J.E., Baker, V.R., Waitt, R.B., Smith, L.N., Cannon, C.M., George, D.L., and Denlinger, R.P., 2020, The Missoula and Bonneville Floods—A review of ice-age megafloods in the Columbia River Basin: *Earth-Science Reviews*, <https://doi.org/10.1016/j.earscirev.2020.103181> (428)
- Rodriguez, J.A.P., Baker, V.R., Liu, T. Hui, T., Kargel, J.S., Gulick, V., Zarroca, M M., Komatsu, G., Berman, D. C., and Linares' R., in preparation, Evidence of Early Mars Ocean Floor Materials in a Mega-Tsunami Deposit. (427)
- Rodriguez, J.A.P., Noe Dobrea, E., Kargel, J.S., Baker, V.R., and 5 others, 2020, Oldest highlands of Mars may be massive dust fallout deposits: *Nature Scientific Reports* 10: 10347. <https://doi.org/10.1038/s41598-020-64676-z> (426)
- Rodriguez, J.A.P., Leonard, G. J, Kargel, J.S, Domingue, D., Berman, D.C., Banks, M., Zarroca, M., Linares, R., Marchi, S., Baker, V.R., Webster, K.D., and Sykes, M., 2020, The chaotic terrains of Mercury reveal a history of planetary volatile retention and loss in the innermost solar system: *Nature Scientific Reports*, v. 10, article 4737.

- Rodriguez, J.A.P., et al. (incl. **Baker, V.R.**), N., in preparation, Viking 1 lander may have landed on an early Mars megatsunami deposit: *Nature Scientific Reports*. (424)
- Rodriguez, J.A.P., Tanaka, K.L., Branson, A., Leonard, G. J., and **Baker, V.R.**, in revision, Evidence of the youngest large-scale erosion event of the north polar plateau of Mars *Nature Scientific Reports*. (423)
- 2019 Baker, V.R., 2019, The abductive approach to synthetic autonomous reasoning, in Proc. SPIE 10982, Micro- and Nanotechnology Sensors, Systems, and Applications XI; (7p.) 1098224, (13 May 2019); doi: 10.1117/12.2519151 (422)
- Blösch, G. and 200 others (including **Baker, V.R.**), 2019, Twenty-three unsolved problems in hydrology (UPH)—a community perspective: *Hydrological Science Journal*, v. 64, no. 10, p. 1141-1158. (421)
- Fairén, A.G., Schulze-Makuch, D., Whyte, L., Parro, V., Pavlov, A., Gómez-Elvira, J., Azua-Bustos, A., Fink, W., and **Baker, V.R.**, 2019, Planetary protection and the astrobiological exploration of Mars: Proactive steps in moving forward: *Advances in Space Research*, v. 63, issue 5, p. 1491-1497. (420)
- Fink, W., **Baker, V.R.**, Brooks, A. J.-W., Flammia, M., M.A, Dohm, J., Tarbel, 2019, Globally Optimal Rover Traverse Planner using Dijkstra's Algorithm For Multi-Objective Deployment Scenarios: *Planetary and Space Science*, v. 179, <https://doi.org/10.1016/j.pss.2019.104707>. (419)
- Liu, T., Greenbaum, N., **Baker, V.R.**, Ji, L., Onken, J., Weisheit, J., Porat, N. Rittenour, T., 2019, Paleoflood hydrology of the lower Green River, upper Colorado River Basin, USA: An example of a naturalist approach to flood-risk analysis: *Journal of Hydrology*, doi: <https://doi.org/10.1016/j.jhydrol.2019.124337> (418)
- Rodriguez, J.A.P., **Baker, V.R.**, Liu, T., Zarroca, M. Travis, B, Hui, T., Komatsu, G., Berman, D.C., Linares, R., Sykes, M., Banks, M., and Kargel, J.S., 2019, The 1997 Mars Pathfinder Spacecraft Landed on Spillover Flood Deposits from an Early Mars Inland Sea: *Nature Scientific Reports* 9(1), 4045. doi:10.1038/s41598-019-39632-1
- 2018 Dohm, J.M., Maruyama, S., Kido, M., and **Baker, V.R.**, 2018, A possible anorthositic continent of early Mars and the role of planetary size for the inception of Earth-like life: *Geoscience Frontiers*, v. 9, p. 1085-1098. (416)
- Fink, W., Brooks, A.J.-W., and **Baker, V.R.**, 2018, Tip- or Rollover protection mechanisms for planetary rovers enabling exploration of high-risk sites, in IEEE Aerospace Conference 2018 Proceedings, Big Sky, Montana, Paper # 2862, p. 1-11. DOI: 10.1109/AERO.2018.8396821 (415)
- Liu, T., and **Baker, V.R.**, 2018, Hydraulic modeling of megaflooding using terrestrial and Martian DEMs, in *Geomorphometry Conference Proceedings*, Boulder, Colorado, DOI: 10.7287/peerj.preprints, issue 27107v1. (414)
- Pondrelli, M., **Baker, V.R.**, Hauber, E., and Rossi, A.P, 2018, Geologic tools, Chapter 2, in Rossi, A.P. and Van Gasselt, S., editors, *Planetary Geology*: Springer, Heidelberg, p. 15-31. (413)
- Wilhelm, B., Ballesteros-Canovas, J., Macdonald, N., Toonen, W.H.J., **Baker, V.**, and 17 Others, 2018, Interpreting historical, botanical, and geological evidence to aid preparation for future floods: *Wiley Interdisciplinary Reviews: Water*: <http://dx.doi.org/10.1002/wat2.1318> (412)
- 2017 Baker, V.R., 2017, Debates—Hypothesis testing in hydrology: pursuing certainty versus

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