

Steven H. Emerman

Owner, Malach Consulting: Specializing in Groundwater and Mining

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Consulting Areas:

Hydrologic modeling, geophysical interpretation, geostatistics, satellite image interpretation, earthen and tailings dams, environmental arsenic and heavy metals, scientific translation

Software Expertise:

AquiferTest, ArcGIS, HEC-RAS, MATLAB, Python, R, Visual MODFLOW, Vulcan

Languages:

English, French, Hebrew, Latin, Nepali, Polish, Portuguese, Russian, Spanish

Selected Recent Clients (with location of project):

Above Ground (Brazil), Acción Ecológica (Ecuador), Andrew Lees Trust (Madagascar), Anthropocene Alliance (Mississippi, Texas), Arizona Mining Reform Coalition, Asociación Interamericana para la Defensa del Ambiente (Colombia), Asociación Verdegaiá (Spain), Brolly Jameson Solicitors (Northern Ireland), Citizens' Alliance for North Korean Human Rights, Comissão Pastoral da Terra de Minas Gerais (Brazil), Comunidad Amazónica de Acción Social Cordillera del Cóndor Mirador (Ecuador), ContraMINAcción (Spain), Defensa y Conservación Ecológica de Íntag (Ecuador), Earth Community Garden and Food Pantry (Utah), Ecologistas en Acción (Spain), Education, Economics, Environmental, Climate and Health Organization (Mississippi), E-Tech International (Ecuador), European Center for Constitutional and Human Rights (Germany), Frank Bold Society (Poland), Friends of the Boundary Waters Wilderness (Minnesota), Greencastle Community Voices/Save our Sperrins (Northern Ireland), Groundwater Relief (South Sudan, Syria), Inclusive Development International (Indonesia), International Rivers (Ecuador), Kaplan Fox & Kilsheimer, LLP (Brazil), London Mining Network (Spain), Matías J. Adrogué Attorneys (Texas), MiningWatch Canada (Ecuador), Pacific Asia Resource Center (Ecuador), Phoenix Law (Northern Ireland), Plataforma Mina Touro-O Pino Non (Spain), Residents Against Flooding (Texas), Richwood Advisory Council (Texas), Ymir Community Watershed Society (Canada)

Education:

Ph.D., Geophysics, Cornell University, 1984
M.A., Geophysics, Princeton University, 1980
B.S., Mathematics, The Ohio State University, 1978

Professional Experience:

Fulbright Professor (October-November 2018), Visiting Professor (June-July 2016), Faculty of Geological and Petroleum Engineering, Escuela Politécnica Nacional, Quito, Ecuador
Associate Professor of Hydrology, Utah Valley University, Orem, Utah, 2008-2018
Associate Professor of Geology (2004-2007), Assistant Professor of Geology (1998-2004), Simpson College, Indianola, Iowa
Fulbright Professor of Geology, Tri-Chandra Multiple Campus, Kathmandu, Nepal, 2003
Assistant Professor of Geology, Ashland University, Ashland, Ohio, 1995-1998
Visiting Scientist (Plant Physiological Ecology, 1994-1995), Research Associate III (Soil Hydrology and Soil Physics, 1993-1994), Cornell University, Ithaca, New York
Mechanical Engineer, Transonic Systems, Ithaca, New York, 1989-1992
Lecturer, Department of Physics, University of Botswana, Gaborone, Botswana, 1987-1989
Postdoctoral Research Associate, Cornell Injection Molding Program, School of Mechanical and Aerospace Engineering, Cornell University, Ithaca, New York, 1984-1986

Selected Awards:

Community Engaged Faculty, Utah Campus Compact Presidential Award, 2017
Community Engaged Scholar of the Year, Utah Valley University, 2017
University Faculty Fellow in Ethics for Liberal Arts and Science, Utah Valley University, 2012
Presidential Award of Excellence in Engagement, Utah Valley University, 2011
Full-Time Faculty of the Year, Wolverine Achievement Awards, Utah Valley University, 2010

Selected Recent Consulting Reports:

Emerman, S.H., 2020. Evaluation of the updated Environmental Statement for the proposed Curraghinalt Gold Project, County Tyrone, Northern Ireland: Report to Phoenix Law, 40 p.

Emerman, S.H., 2019. A model for coal production by prisoners in North Korea—Parts I and II: Report to Citizens' Alliance for North Korean Human Rights, 42 p.

Emerman, S.H., 2019. Impact on regional water quality of the Rio Tinto QMM ilmenite mine, southeastern Madagascar: Report to Andrew Lees Trust, 43 p.

Emerman, S.H., 2019. An evaluation of the use of a cutoff wall for the mitigation of transboundary groundwater impacts from the Turów coal mine, Lower Silesia, Poland: Report to Frank Bold Society, 22 p.

Emerman, S.H., 2019. Análisis de riesgo de las presas de relaves en la mina Riotinto, Andalucía, España [Risk analysis of the tailings dams at the Riotinto mine, Andalusia, Spain]: Report to London Mining Network, 62 p.

Emerman, S.H., 2019. Reconsideración del nivel de fondo natural de cadmio en el entorno de la mina San Finx, Galicia, España [Reconsideration of the natural background level of cadmium in the vicinity of the San Finx Mine, Galicia, Spain]: Report to Asociación Verdegaiá, 19 p.

Emerman, S.H., 2019. Critique of a Phase 2 Watershed Assessment of the impact of planned logging in the Quartz Creek Community Watershed, British Columbia, Canada: Report to Ymir Community Watershed Society, 26 p.

Emerman, S.H., 2019. Evaluation of the maximum design earthquake for the tailings storage facilities for the proposed Resolution Copper Mine, Arizona: Report to Arizona Mining Reform Coalition, 14 p.

Emerman, S.H., 2019. Evaluation of predictions of land subsidence due to panel caving at the Resolution Copper Mine, Arizona: Report to Arizona Mining Reform Coalition, 17 p.

Emerman, S.H., 2019. Projected consumption of electricity and water by the proposed Resolution Copper Mine, Arizona: Report to Arizona Mining Reform Coalition, 14 p.

Emerman, S.H., 2019. The impact of pumping and sandbagging by the City of Lake Jackson on flooding in the city of Richwood and other county areas following Hurricane Harvey: Report to Matías J. Adrogué Attorneys at Law, 40 p.

Emerman, S.H., 2019. Evaluación del diseño y de la construcción de las presas de relaves para la mina Mirador, Zamora Chinchipe, Ecuador [Evaluation of the design and construction of the tailings dams for the Mirador Mine, Zamora Chinchipe, Ecuador]: Report to E-Tech International, 42 p.

Emerman, S.H., 2019. Evaluation of a hydrogeological and geophysical investigation in Upper Nile State, South Sudan: Report to Groundwater Relief, 20 p.

Emerman, S.H., 2018. Evaluación del plan de almacenamiento de estériles en el “Proyecto Touro” (Concesión de explotación San Rafael n.º 2946), Galicia, España [Evaluation of a plan for tailings storage for the “Touro Project” (Mining Concession San Rafael No. 2946), Galicia, Spain]: Report to Plataforma Mina Touro-O Pino Non, 18 p.

Emerman, S.H., 2018. Potential impact of geothermal water on the financial success of the Resolution Copper Mine, Arizona: Report to Arizona Mining Reform Coalition, 14 p.

Emerman, S.H., 2018. Évaluation des risques de perte de radionucléides provenant des bassins miniers exploités par Rio Tinto sur les rives des lacs Besaroy et Ambavarano, Madagascar [Risk assessment for loss of radionuclides from mining basins operated by Rio Tinto on the shores of Lakes Besaroy and Ambavarano, Madagascar]: Report to Andrew Lees Trust, 26 p.

- Emerman, S.H., 2018. Évaluation d'une zone tampon dans une mine d'ilménite exploitée par Rio Tinto sur les rives des lacs Besaroy et Ambavarano, Madagascar [Evaluation of a buffer zone at an ilmenite mine operated by Rio Tinto on the shores of Lakes Besaroy and Ambavarano, Madagascar]: Report to Andrew Lees Trust, 43 p.
- Emerman, S.H., 2018. Avaliação de três estudos de arsênico ambiental junto à mina Morro do Ouro operada pela Kinross Gold, Minas Gerais, Brasil [Evaluation of three studies of environmental arsenic near the Morro do Ouro mine operated by Kinross Gold, Minas Gerais, Brazil]: Report to Above Ground, 19 p.
- Casales, E.B., S.H. Emerman, S.I. Garrido, J.M. Lourido, C.Q. Sabarís, D.R. Vieites, and M.R. Bará, 2018. Informe sobre o proxecto de autorización de verteduras da mina de San Fins, Lousame [Report on the authorization project for discharges from the San Fins Mine, Lousame]: Report to Municipality of Muros (Galicia, Spain), 75 p.
- Emerman, S.H., 2018. Evaluation of the use of a mixing model in a water discharge consent issued by the Northern Ireland Environment Agency: Report to Brolly Jameson Solicitors, 44 p.
- Emerman, S.H., 2016. Effect of scaling on the safety of earthen dams—application to a proposed expansion of the Mirador mine, Ecuador: Report to E-Tech International, 11 p.

Publications (Peer-Reviewed):

(Names in boldface are undergraduate co-authors.)

- Emerman, S.H., **M.S. Abbott, S.K. Tulley, S.I. Nofchissey, P.G. Bushman, D. Joe, J.E. Gherasim, S.R. Campbell, E.C. Matheson, K.L. Larsen, B.O. Howell, and D.J. Zacharias**, 2018. The history of water in Bears Ears National Monument, southeastern Utah: In Emerman, S.H., B. Bowen, S. Schamel, and S. Simmons (eds.), *Geofluids of Utah: 2018 Utah Geological Association Publication 47*, pp. 1-21.
- Colledge, P.** and S.H. Emerman, 2017. The use of detrital zircon geochronology in the Wasatch Conglomerate (Eocene) to determine river directions before the rise of the Wasatch Range, Utah: In Lund, W., S.H. Emerman, W. Wang, and A. Zanazzi (eds.), *Geology and Resources of the Wasatch: Back to Front: 2017 Utah Geological Association Publication 46*, pp. 399-417.
- Emerman, S.H., 2017. The use of lichenometry for assessment of the destruction and reconstruction of Buddhist sacred walls in Langtang Valley, Nepal Himalaya, following the 2015 Gorkha earthquake: *Arctic, Antarctic and Alpine Research*, v. 49, pp. 61-79.
- Emerman, S.H., **S. Adhikari, S. Panday, T.N. Bhattarai, T. Gautam, S.A. Fellows, R.B. Anderson, N. Adhikari, K. Karki, and M.A. Palmer**, 2016. The integration of the direct and indirect methods in lichenometry for dating Buddhist sacred walls in Langtang Valley, Nepal Himalaya: *Arctic, Antarctic and Alpine Research*, v. 48, pp. 9-31.
- Matheson, E.C.**, S.H. Emerman, **S. Roberts, D.H. Natter, D.R. Sutterfield, A.W. Fletcher, M.J. Arnoff, A.C. Lawrence**, and S.A. Fellows, 2015. Geophysical and hydrological survey to assess the economic potential of a gossan in the eastern Uinta Mountains, Utah: In Birgenheier, L., R. Resselar, and M. Vanden Berg (eds.), *The Uinta Basin and Uinta Mountains: Utah Geological Association Publication 44*, pp. 355-370.
- Emerman, S.H., **J.R. Nelson, J.K. Carlson, T.K. Anderson, A. Sharma**, and B.R. Adhikari, 2014. The effect of surface lithology on arsenic and other heavy metals in surface water and groundwater in Mustang Valley, Nepal Himalaya: *Journal of Nepal Geological Society*, v. 47, pp. 57-77.
- Ivie, H.A.**, S.H. Emerman, **D.B. Dastrup, A.W. Simister, J. Selck, D.R. Howard, and A.W. Fletcher**, 2014. An improved method for calculating the Manning roughness coefficient for estimation of stream discharge through slot canyons in southern Utah: In MacLean, J.S., R.F. Biek, and J.E. Huntoon (eds.), *Geology of Utah's Far South: Utah Geological Association Publication 43*, pp. 1-10.
- Lloyd, L., R. Heaslet**, and S.H. Emerman, 2014. Magnetic susceptibility of tree leaves as a simple, cost-effective means of monitoring air quality. *Proceedings of The National Conference on Undergraduate Research (NCUR) 2014*, pp. 1141-1152.

- Dastrup, D.B., G.R. Ferreira, D. Zacharias, D.H. Natter, L.T. Kellum, B.B. Davis, M.R. Alexander, J. Selck,** and S.H. Emerman, 2013. A plan for conversion of stormwater to groundwater recharge on the Utah Valley University Main Campus, Orem, Utah: Proceedings of The National Conference on Undergraduate Research (NCUR) 2013, pp. 919-929.
- Emerman, S.H., **K.L. Stuart, A. Sapkota, S. Khatri,** B.R. Adhikari, **J.A. Williams,** and **P.K. Garcia,** 2013. Support for the fluvial recharge model for arsenic contamination of groundwater in Pokhara Valley, Nepal Himalaya: Journal of Nepal Geological Society, v. 46, pp. 75-94.
- McFadden, S.,** S.H. Emerman, J.P. Dawson, **K.A. Rey,** and **T.K. Anderson,** 2012. Evidence from detrital zircon ages for Middle Pennsylvanian uplift and drainage in the source area of the Chariton Conglomerate and Marmaton Group sandstones, southern Iowa and northern Missouri: Journal of the Iowa Academy of Science, v. 119, pp. 8-15.
- Ferreira, G.** and S.H. Emerman, 2012. Fluvial arsenic in Utah Valley, Salt Lake Valley and the Wasatch Range: Analogy with the Himalayan Range and the Ganges River Floodplain: Proceedings of The National Conference on Undergraduate Research 2012, pp. 1426-1432.
- Stuart, K.** and S.H. Emerman, 2012. Developing rating curves for bedrock step-pool rivers using sparse data: Proceedings of The National Conference on Undergraduate Research 2012, pp. 644-652.
- Emerman, S.H., M. Bjørnerud, J.S. Schneiderman, and S.A. Levy (eds.), 2012. Liberation Science: Putting Science to Work for Social and Environmental Justice. Lulu Press, Raleigh, North Carolina.
- Emerman, S.H. and M. Bjørnerud, 2012. Introduction: What is liberation science? In Emerman, S.H., M. Bjørnerud, J.S. Schneiderman, and S.A. Levy (eds.), Liberation Science: Putting Science to Work for Social and Environmental Justice, Lulu Press, Raleigh, North Carolina.
- Emerman, S.H., **A.J. Luhrs, S.E. Sandford,** and **A. Finken,** 2012. Self-organizing systems and environmental justice: Application to arsenic contamination of groundwater in Nepal: In Emerman, S.H., M. Bjørnerud, J.S. Schneiderman, and S.A. Levy (eds.), Liberation Science: Putting Science to Work for Social and Environmental Justice, Lulu Press, Raleigh, North Carolina.
- Emerman, S.H., **R.B. Anderson, S. Bhandari, R.R. Bhattarai, M.A. Palmer,** T.N. Bhattarai, and M.P. Bunds, 2011. Arsenic and other heavy metals in the Sunkoshi and Saptakoshi Rivers, eastern Nepal: Journal of Nepal Geological Society, v. 43, pp. 101-114.
- Bunds, M.P., S.H. Emerman, T.N. Bhattarai, **R.B. Anderson, N. Adhikari, K. Karki,** and **M.A. Palmer,** 2010. Using lichenometry to assess long term GLOF and landslide frequency in the Nepal Himalaya: In Williams, A.L, G.M. Pinches, C.Y. Chin, T.J. McMorrnan, and C.I. Massey (eds.), Geologically Active: Proceedings of the 11th IAEG Congress. Auckland, New Zealand, 5 – 10 September 2010.
- Emerman, S.H., T. Prasai, **R.B. Anderson,** and **M.A. Palmer,** 2010. Arsenic contamination of groundwater in the Kathmandu Valley, Nepal, as a consequence of rapid erosion: Journal of Nepal Geological Society, v. 40, pp. 49-60.
- Leichty, R.J.,** S.H. Emerman, **L.R. Hawkins,** and **M.J. Tiano,** 2008. Pre-settlement vegetation at Casey's Paha State Preserve, Iowa: Journal of the Iowa Academy of Science, v. 115, pp. 12-16.
- Dillon, K.R.,** S.H. Emerman, and **P.K. Wilcox,** 2008. Artists' depictions of catsteps in the Loess Hills of Iowa: Evidence for mid-nineteenth century climate change: Journal of the Iowa Academy of Science, v. 113, pp. 69-80.
- Skinner, G.,** S.H. Emerman, and **R.J. Leichty,** 2008. Fluorine uptake by cultivated and uncultivated grasses: Implications for coevolution between grasses and grazers: BIOS, v. 79, pp. 61-66.
- Emerman, S.H., T.N. Bhattarai, D.P. Adhikari, **S.R. Joshi, S.L. Lakhe, A.J. Luhrs, K.R. Prasai,** and **K.L. Robson,** 2007. Origin of arsenic and other heavy metals in the rivers of Nepal: Journal of Nepal Geological Society, v. 35, pp. 29-36.
- Kraber, J.C.,** S.H. Emerman, **M.R. Bennett, L.R. Hawkins, J.E. Moore, R. Ellenwood, K.L. Robson,** and **A. Finken,** 2007. Laboratory abrasion of crinoids and the provenance of the Chariton conglomerate: Journal of the Iowa Academy of Science, v. 114, pp. 44-53.

- Emerman, S.H., **B.R. Depew**, and **L.K. Anderson**, 2005. Iowa's sand prairie state preserves: Grain-size distributions and optically stimulated luminescence (OSL) dates: *Journal of the Iowa Academy of Science*, v. 112, pp. 17-23.
- Emerman, S.H., 2005. Arsenic and other heavy metals in the rivers of central Nepal: *Journal of Nepal Geological Society*, v. 31, pp. 11-18.
- Emerman, S.H., 2004. Deforestation, arsenic, and the self-organizing jungle in the Terai region of Nepal: *Journal of Nepal Geological Society*, v. 29, pp. 13-22.
- Allen, N.S.** and S. H. Emerman, 2003. The control of the nitrogen cycle as a mechanism for the self-organization of prairie ecosystems: In Foré, S. (ed.), *Proceedings of the 18th North American Prairie Conference*, Truman State University Press, Kirksville, Missouri, pp. 151-156.
- Emerman, S.H. and **E.M. Kinsinger**, 2003. Salt tolerance of sunflower and lettuce in cultivated and uncultivated grass soil: *Journal of the Iowa Academy of Science*, v. 110, pp. 33-39.
- Emerman, S.H. and T.E. Dawson, 1997. Experiments using split-root chambers on water uptake from soil macropores by sunflowers: *Plant and Soil*, v. 189, pp. 57-63.
- Emerman, S.H., 1997. Asymptotic solutions for sorption of water by a heavy clay soil: *Journal of Hydrology*, v. 187, pp. 297-309.
- Emerman, S.H. and T.E. Dawson, 1996. Hydraulic lift and its influence on the water content of the rhizosphere: An example from sugar maple, *Acer saccharum*: *Oecologia*, v. 100, pp. 273-278.
- Emerman, S.H. and T.E. Dawson, 1996. The role of macropores in the cultivation of bell pepper in salinized soil: *Plant and Soil*, v. 181, pp. 241-249.
- Emerman, S.H., 1995. The tipping bucket equations as a model for macropore flow: *Journal of Hydrology*, v. 171, pp. 23-47.
- Marrett, R. and S.H. Emerman, 1992. The relations between faulting and mafic magmatism in the Altiplano-Puna Plateau (Central Andes): *Earth and Planetary Science Letters*, v. 112, pp. 53-59.
- Emerman, S.H., 1991. Correlation of a dyke swarm in southeastern Botswana with the Pilanesberg dyke swarm, South Africa: *Journal of African Earth Sciences*, v. 12, pp. 525-531.
- Emerman, S.H. and R. Marrett, 1990. Why dikes?: *Geology*, v. 18, pp. 231-233.
- Emerman, S.H., 1988. Heat transfer and lateral particle migration in suspension flow through a convergent channel: *International Journal of Multiphase Flow*, v. 14, pp. 91-98.
- Emerman, S.H., 1987. Prediction of polymer-filler redistribution in injection molding: *Polymer Engineering and Science*, v. 27, pp. 1105-1112.
- Emerman, S.H., D.L. Turcotte, and D.A. Spence, 1986. Transport of magma and hydrothermal solutions by laminar and turbulent fluid fracture: *Physics of the Earth and Planetary Interiors*, v. 41, pp. 249-259.
- Turcotte, D.L., S.H. Emerman, and D.A. Spence, 1986. Mechanics of dyke injection: In Halls, H.C. and W.F. Fahrig (eds.), *Mafic dyke swarms*, Geological Association of Canada Special Paper 34, pp. 25-29.
- Ockendon, J.R., A.B. Tayler, S.H. Emerman, and D.L. Turcotte, 1985. Geodynamic thermal runaway with melting: *Journal of Fluid Mechanics*, v. 152, pp. 301-314.
- Emerman, S.H. and D.L. Turcotte, 1984. The mid-ocean ridge axial valley as a steady-state neck: *Earth and Planetary Science Letters*, v. 71, pp. 141-146.
- Emerman, S.H. and D.L. Turcotte, 1984. Diaperic penetration with melting: *Physics of the Earth and Planetary Interiors*, v. 36, pp. 276-284.
- Emerman, S.H. and D.L. Turcotte, 1984. A back-of-the-envelope approach to boudinage mechanics: *Tectonophysics*, v. 110, pp. 333-338.
- Turcotte, D.L. and S.H. Emerman, 1983. Dissipative melting as a mechanism for core formation: *Proceedings of the 14th Lunar and Planetary Science Conference, Part 1*, *Journal of Geophysical Research*, v. 88, Supplement, pp. B91-B96.
- Emerman, S.H. and D.L. Turcotte, 1983. Stokes's problem with melting: *International Journal of Heat and Mass Transfer*, v. 26, pp. 1625-1630.

- Emerman, S.H. and D.L. Turcotte, 1983. A fluid model for the shape of accretionary wedges: *Earth and Planetary Science Letters*, v. 63, pp. 379-384.
- Emerman, S.H. and D.L. Turcotte, 1983. Stagnation flow with a temperature-dependent viscosity: *Journal of Fluid Mechanics*, v. 127, pp. 507-517.
- Turcotte, D.L. and S.H. Emerman, 1983. Mechanisms of active and passive rifting: *Tectonophysics*, v. 94, pp. 39-50.
- Emerman, S.H. and R.A. Stephen, 1983. Comment on “Absorbing boundary conditions for acoustic and elastic wave equations,” by R. Clayton and B. Engquist: *Bulletin of the Seismological Society of America*, v. 73, pp. 661-665.
- Emerman, S.H., W. Schmidt, and R.A. Stephen, 1982. An implicit finite-difference formulation of the elastic wave equation: *Geophysics*, v. 47, pp. 1521-1526.

Publications (Non-Peer-Reviewed):

(Names in boldface are undergraduate co-authors.)

- Ostraff, A.A., S.H. Emerman, N.D. Udy, S.M. Allen, H. Rakotoarisaona, J. Gherasim, A.M. Stallings, J.N. Saldivar, K.L. Larsen, and M. Abbott**, 2018. Use of the Manning Equation for predicting the discharge of high-gradient canals and natural streams: In Ramirez, J.A. (ed.), *Proceedings of the 38th Annual American Geophysical Union Hydrology Days*, Hydrology Days Publications, Fort Collins, Colorado, pp. 44-55.
- Allen, S.M., S.H. Emerman, T.H. Murdock, and S.K. Tulley**, 2016. A conceptual framework for the use of machine learning for the synthesis of stream discharge – gage height rating curves: In Ramirez, J.A. (ed.), *Proceedings of the 36th Annual American Geophysical Union Hydrology Days*, Hydrology Days Publications, Fort Collins, Colorado, pp. 1-12.
- Rundall, J.B., B.E. Parsons, S.H. Emerman, and M.R. Jorgensen**, 2015. Towards a new classification of rivers based on generic gage height – discharge rating curves for low-cost estimation of stream discharge: In Ramirez, J.A. (ed.), *Proceedings of the 35th Annual American Geophysical Union Hydrology Days*, Hydrology Days Publications, Fort Collins, Colorado, pp. 63-73.
- Dastrup, D.B., G.R. Ferreira, D. Zacharias, D.H. Natter, L.T. Kellum, S.H. Emerman, B.B. Davis, M.R. Alexander, and J. Selck**, 2013. A plan for the conversion of stormwater to groundwater recharge on the Utah Valley University Main Campus, Orem, Utah: In Ramirez, J.A. (ed.), *Proceedings of the 33rd Annual American Geophysical Union Hydrology Days*, Hydrology Days Publications, Fort Collins, Colorado, pp. 10-21.
- Stuart, K.L.** and S.H. Emerman, 2012. Developing rating curves for bedrock step-pool rivers using sparse data: In Ramirez, J.A. (ed.), *Proceedings of the 32nd Annual American Geophysical Union Hydrology Days*, Hydrology Days Publications, Fort Collins, Colorado, pp. 143-152.
- Dillon, K.R., S.H. Emerman, and P.K. Wilcox**, 2006. Artists’ depictions of catsteps in the Loess Hills of Iowa: Evidence for mid-nineteenth century climate change: In Ramirez, J.A. (ed.), *Proceedings of the 26th Annual American Geophysical Union Hydrology Days*, Hydrology Days Publications, Fort Collins, Colorado, pp. 25-36.
- Robson, K.L.** and S.H. Emerman, 2003. Bedrock map of Buchanan and East River Townships, Page County, southwestern Iowa, 1:24,000, report to U.S. Geological Survey.
- Emerman, S.H. and J.R. Parmelee, 2002. The control of infiltration as a mechanism for the self-regulation of prairie ecosystems: Preliminary studies at Rolling Thunder Prairie State Preserve, Warren County, Iowa: In Ramirez, J.A. (ed.), *Proceedings of the 22nd Annual American Geophysical Union Hydrology Days*, Hydrology Days Publications, Fort Collins, Colorado, pp. 76-85.
- Emerman, S.H., **B.R. Depew, and L.K. Anderson**, 2002. Origin of the sand prairies of Iowa: In Lee, J.A. and T.M. Zobeck (eds.), *Proceedings of the 5th International Conference on Aeolian Research*, International Center for Arid and Semiarid Lands Studies, Texas Tech University, Lubbock, Texas, pp. 373-376.

- Pope, J.P. and S.H. Emerman, 2000. From brachiopods to big bluestem: The cyclothem, stratigraphy, and structure of Madison and Warren Counties, Iowa: Geological Society of Iowa Guidebook 69, 58 p.
- Emerman, S.H., 1997. Geomorphology and hydrology of Ashland and Richland Counties, north central Ohio: Field Guide for the 1997 Ohio Intercollegiate Field Conference, 23 p.
- Emerman, S.H., 1996. Mississippian and Pennsylvanian formations of Ashland and Richland Counties, north central Ohio: Field Guide for the 1996 Ohio Intercollegiate Field Conference, 18 p.
- Emerman, S.H., 1996. Towards a theory of hydraulic lift in trees and shrubs: In Morel-Seytoux, H.J. (ed.), Proceedings of the 16th Annual American Geophysical Union Hydrology Days, Hydrology Days Publications, Atherton, California, pp. 147-157.
- Emerman, S.H. and T.E. Dawson, 1995. Ecological implications of soil macropores: In Morel-Seytoux, H.J. (ed.), Proceedings of the 15th Annual American Geophysical Union Hydrology Days, Hydrology Days Publications, Atherton, California, pp. 33-46.