

Curriculum Vitae January 2026 Ronald I. Dorn

Business:

School of Geographical Sciences, Arizona State University Tempe AZ 85287-0104
(602) 965-7533; FAX (602) 965-8313
E-Mail: ronald.dorn@asu.edu

Education:

A.B.(Geography), University of California, Berkeley, 1980
M.A.(Geography), University of California, Berkeley, 1982
Ph.D.(Geography), University of California, Los Angeles, 1985

Biographical Sketch: Ronald I. Dorn has been a Professor of Geography at Arizona State University, Tempe, Arizona since 1988. He served previously on the faculty at Texas Tech University. He has been President and Secretary/Treasurer of the Geomorphology Specialty Group and as chair of the Nystrom Committee of the Association of American Geographers. He is a Fellow of the Geological Society of America and the Arizona/Nevada Academy of Science, and a member of the Association of American Geographers and the Association of Pacific Coast Geographers. He is married and has two children.

Present Research Activities: desert geomorphology, rock art conservation, petroglyph analysis, quantification and geography of mineral weathering, geographic education, tyranny of the majority in science, rock coatings

Positions

Arizona State University, Tempe : Assistant, Associate, and Full Professor of Geography (1988-current); Co-Coordinator, Arizona Geographic Alliance (1996- current)

Texas Tech University, Lubbock: Assistant and Associate Professor of Geography (1985-1988); Research Associate, International Center Arid and Semi-Arid Land Studies (1985-1988).

Books: *Rock Coatings*. (No. 6 in Developments in Earth Surface Processes Series) Elsevier, 1998. 429 pp.

Geomorphology: Mojave Desert to Death Valley. Guide to Field Excursion A3. International Association of Geomorphologists Third International Geomorphology Conference. Tempe, Arizona: Arizona State University, Department of Geography Publication #4, 137 p., 1993. (with Norman Meek)

Refereed Articles and Book Chapters

197. Whitley, D.S. and Dorn, R.I. 2026. [Rock varnish dating, surface features and archaeological controversies in the North American Desert West](https://doi.org/10.3390/arts15010006). Arts 15, 6, <https://doi.org/10.3390/arts15010006>

196. Clements R.L. Dorn, R.I. Scheeckle, M.W. and Gordon, S.J. 2025. [Lenticular-shaped boulders of South Mountains](https://doi.org/10.1080/02723646.2025.2556915), central Arizona, USA. Physical Geography 46 (6): 565-584, <https://doi.org/10.1080/02723646.2025.2556915>

195. Kelley, M.M., Walker, I., Schmeeckle, M., Swann, C., Dorn, R., Roberts, and O'Brien, P. 2025. Changes in aeolian saltation cloud properties with wind speed and ripples. *Aeolian Research* 74 10996. <https://www.sciencedirect.com/science/article/pii/S1875963725000370>
194. Jeong, A., Connor, D.S., Dorn, R.I. and Seong, Y.B. 2025. Estimating urbanization's impact on soil erosion: A global comparative analysis and case study of Phoenix USA. *Land* 14 (8): 1950: <https://doi.org/10.3390/land14081590>
193. Dorn, R.I. Larson, P.H. and Jeong, A. Landforms on Faulted Rocks, in *Essentials of Geomorphology*, Schaeztl, R. and Marson R., Editors. Cambridge University Press.
192. Dorn, R.I. 2025. [Revisiting the importance of clay minerals in rock varnish](https://doi.org/10.2138/am-2025-9768). *American Mineralogist* 110: 1341-1342 <https://doi.org/10.2138/am-2025-9768>
191. Roberts, M., Haar, M., Messer, O, and Dorn, R.I. 2024. Equilibrium and non-equilibrium adjustment of tributary drainages in response to downcutting of the Salt River, Northeastern Sonoran Desert, Arizona. *Association of Pacific Coast Geographers Yearbook* 86: 1-16.
190. Seong, Y.B., Shandonay, K., Dorn, R.I., Gootee, B., and Yu, B.Y. 2024. [Speculation on an early Pleistocene origin of the Parker Dunes of southwest Arizona](https://doi.org/10.1002/esp.5632), USA. *Aeolian Research* 70-71: 100943
189. Dorn, R.I. 2024. [Rock varnish revisited](https://doi.org/10.1177/03091333241248038). *Progress in Physical Geography* 48: 389-419. <https://doi.org/10.1177/03091333241248038>
188. Moll, H.L., Dorn, R.I. 2023. [Addressing out-of-field geography teaching in Arizona, USA](https://doi.org/10.1080/02723646.2023.2251654), through summer workshops to build a cadre of geography advocates. *Geographical Education*, 36: 1-15.
187. Jeong A., Seong Y.B., Dorn, R.I. and Yu, B.Y. 2023. [Precipitation as a key control on erosion rate](https://doi.org/10.1080/02723646.2023.2251654) in the tectonically inactive northeastern Sonoran Desert, central Arizona, USA. *Physical Geography*: <https://doi.org/10.1080/02723646.2023.2251654>
186. Dorn, R.I. 2023. [Decay of ignimbrite fairy chimneys of Arizona's Basin and Range Province USA](https://doi.org/10.1002/esp.5632). *Earth Surface Processes and Landforms*: DOI: 10.1002/esp.5632 .
185. Dorn, R.I. and Whitley, D.S. 2023. [Threshold of weathering needed for fire to erode rock art: Case study of a Hohokam petroglyph, central Arizona, USA](https://doi.org/10.1080/13505033.2022.2133790). *Conservation and Management of Archaeological Sites*. doi.org/10.1080/13505033.2022.2133790
184. Allen, C.D., Kennedy, C.D., Groom, K.M., Cervený, N.V., Dorn, R.I. and Whitley, D.S., 2022. 5. [Rock art stability Index](https://doi.org/10.4324/9780429355349-8). *Global Perspectives for the Conservation and Management of Open-Air Rock Art Sites*. DOI: 10.4324/9780429355349-8. [Link to access](https://doi.org/10.4324/9780429355349-8).
183. Larson, P.H., Dorn, R.I., Gootee, B., Seong, Y.B. 2022. [Drainage integration in extensional tectonic settings](https://doi.org/10.1016/j.geomorph.2021.108082). *Geomorphology* 399: <https://doi.org/10.1016/j.geomorph.2021.108082>
182. Dorn, R.I., Walker, I.J. 2022. [Dirt cracking as a rock fracture-wedging process in the Mediterranean climate of Victoria, British Columbia](https://doi.org/10.1016/j.catena.2021.105920), Canada. *Catena* 210: 105920 <https://doi.org/10.1016/j.catena.2021.105920>

181. Dorn, R.I., Gordon, S., Jeong, A. 2022. [Nanoscale: mineral weathering boundary](#). In: Pope, G.A. (Ed), *Weathering and Soils Geomorphology: Treatise on Geomorphology*, 2nd Edition, Elsevier, Amsterdam, p. 116-150 (online PDF file)
180. Dorn, R.I. 2022. [Rock Coatings](#). In: Pope, G.A. (Ed), *Weathering and Soils Geomorphology: Treatise on Geomorphology*, 2nd Edition, Elsevier, Amsterdam, p: 1-35 (online PDF file)
179. Shandonay, K.L., Moll, H., Marvin, C.M., López-Castañeda, N., Kelley, M., Hilgendorf, Z., Heintzman, R., Dorn, R.I. 2021. [The fieldwork of shared experiences](#). *The Geographical Bulletin* 62: 82-88.
178. Jeong, A., Dorn, R.I., Seong, Y.B., and Yu, B.Y. 2021. Acceleration of soil erosion by different land uses in arid lands above 10Be natural background rates: Case study in the Sonoran Desert, USA. *Land* 10, 834: <https://doi.org/10.3390/land10080834>
177. González, C., Kelley, M., Marvin, M.C., López Castañeda, N., Dorn, R. and Schmeeckle, M. 2021. [Regional piedmont incision during base-level rise in the northeastern Sonoran Desert](#), Arizona, USA. *Physical Geography*: <https://doi.org/10.1080/02723646.2021.1934964>
176. Dorn, R.I. 2021. [Assessing biological soil crusts as agents of Ca-Mg silicate dissolution and CO2 sequestration](#). *Physical Geography* 42: 529-541
175. Skotnicki, S.J., Seong, Y.B., Dorn, R.I., Larson, P.H., DePonty, J., Jeong, A. 2020. [Drainage integration of the Salt and Verde rivers in a Basin and Range extensional landscape](#), central Arizona, USA. *Geomorphology* 369: <https://www.sciencedirect.com/science/article/pii/S0169555X20304852>
174. Cheung, S.Y., Walker, I., Myint, S.W. Dorn, R.I. 2020. [Assessing land degradation induced by recreational activities in Algodones Dunes, California, using MODIS images](#). *Journal of Arid Environments* 185: <https://www.sciencedirect.com/science/article/pii/S0140196320302330>.
173. Larson, P.H., Dorn, R.I. Skotnicki, S., Yeong, S.B., Jeong, A. 2020. [Impact of drainage integration on basin geomorphology and landform evolution: Case study along the Salt and Verde Rivers, Sonoran Desert](#), USA. *Geomorphology* 369: <https://doi.org/10.1016/j.geomorph.2020.107439>
172. Dorn, R.I., Skotnicki, S., Wittman, A., Van Soest, M. 2020. [Provenance in drainage integration research](#): Case studies from the Phoenix metropolitan area, south-central Arizona. *Geomorphology* 369: <https://www.sciencedirect.com/science/article/abs/pii/S0169555X20304037> .
171. Dorn, R.I. 2020. [Anthropogenic interactions with rock varnish](#). In: *Ecological Drivers of Biogeochemical Cycles under Changing Environment*, ISBN 9781119413301, eds. Dontsova, K., Balogh-Brunstad, Z., Le Roux, G., Pierret, M-C., American Geophysical Union: Washington D.C. Chapter 13, pp. 267-283
170. Groom, K.M., Cervený, N.V., Allen, C.D., Dorn, R.I. and Theuer, J. 2019. [Protecting stone heritage in the Painted Desert: Employing the rock art stability index in the Petrified Forest National Park, Arizona](#). *Heritage* 2: 2111-2123.

169. Dorn, R.I. and Krinsley, D. 2019. [Nanoscale observations support the importance of chemical processes in rock decay and rock coating development in cold climates](#). Geosciences: 9: DOI: 10.3390/geosciences9030121
168. Jeong, A. and Dorn, R.I. 2019. Soil erosion from urbanization processes in the Sonoran Desert, Arizona, USA. Land Degradation & Development [30](#): 226-238
167. Dorn, R.I. 2018. [Necrogeomorphology and the life expectancy of desert bedrock landforms](#). Progress in Physical Geography: <http://journals.sagepub.com/doi/10.1177/0309133318795839> [82](#): 566-587
166. Dorn, R.I. and Jeong, A. 2018. [Rock coating and weathering-rind development at the edge of retreating glaciers: An initial study](#). Association of Pacific Coast Geographers Yearbook 80: 1-31
165. Jeong, A., Cheung, S.Y., Walker, I.J., and Dorn, R.I. 2018. [Urban geomorphology of an arid city: Case study of Phoenix, Arizona](#). In: Urban geomorphology: Landforms and processes in cities, eds. Thornbush, M.J. and Allen, C.D., Elsevier, pages 175-204.
164. Dorn, R.I., Mahaney, W.C., and Krinsley, D.H. 2017. [Case hardening: Turning weathering rinds into protective shells](#). Elements 13: 155-158.
163. Schindler, M. and Dorn, R.I. 2017. [Coatings on rocks and minerals: The interface between lithosphere and the biosphere, hydrosphere and atmosphere](#). Elements 13: 165-169.
162. Larson, P.H., Meek, N., Douglass, J. Dorn, R.I. and Seong, Y.B. 2017. [How rivers get across mountains: A new landscape via transverse drainage](#). In Special Issue on Mountains, edited by M. Fonstad. Annals of the Association of American Geographers 107: 274-283.
161. Krinsley, D.H., Dorn, R.I., DiGregorio, B., Razink, J. and Fisher, R. 2017. [Mn-Fe enhancing budding bacteria in century-old rock varnish, Erie Barge Canal, New York](#). Journal of Geology 125: 317-336.
160. Larson, P.H., Kelley, S.B., Dorn, R.I., Seong, Y.B. 2016. [Pace of landscape change and pediment development in the northeastern Sonoran Desert, United States \(with supplemental files\)](#) Annals of the Association of American Geographers 106: 1195-1216.
159. Dorn, R.I. 2016. [Identification of debris-flow hazards in warm deserts through analyzing past occurrences: Case study in South Mountain, Sonoran Desert, USA](#). Geomorphology 273: 269-279.
158. Seong, Y.B., Dorn, R.I. and Yu, B.U. 2016. [Evaluating the life expectancy of a desert pavement](#). Earth Science Reviews 162: 129-154
157. Cervený, N.V., Dorn, R.I., Allen, C.D., Whitley, D.S. 2016. [Advances in rapid condition assessments of rock art sites: Rock Art Stability Index \(RASI\)](#). Journal of Archaeological Science Reports (in press): <http://dx.doi.org/10.1016/j.jasrep.2016.06.032>.
156. Seong, Y.B., Larson, P.H., Dorn, R.I., Yu B.Y. 2016. [Evaluating process domains in](#)

[small arid granitic watersheds: Case study of Pima Wash, South Mountains, Sonoran Desert, USA](#). *Geomorphology* 255: 108-124.

155. Turchi, L., Hinde, E.R., Dorn, R.I., Ekiss, G.O. 2016. [Six credit hours for Arizona, the United States, and the World: A Case study of teacher content-knowledge preparation and the creation of social studies courses](#). In Crow, A.R., Cuenca, A., editors, *Rethinking Social Studies Teacher Education in the Twenty-First Century*, pp. 144-166. DOI 10.1007/978-3-319-22939-3_8.

154. Dorn, R.I. 2015. [Impact of consecutive extreme rainstorm events on particle transport: Case study in a Sonoran Desert range, western USA](#). *Geomorphology* 250: 53-62.

153. Larson, P.H., Dorn, R.I., Faulkner, D.J. and Friend D.A. 2015. [Toe-cut terraces: A review and proposed criteria to differentiate from traditional fluvial terraces](#). *Progress in Physical Geography* 39: 417-439.

152. Dorn, R.I. 2014. [Chronology of rock falls and slides in a desert mountain range: Case study from the Sonoran Desert in south-central Arizona](#). *Geomorphology* 223: 81-89.

151. Dorn, R.I. 2014. [Ants as a powerful agent of olivine and plagioclase dissolution](#). *Geology* 42: 771-774.

150. Larson, P.H., Dorn, R.I., Bowles, Z., Harrison, E.J., Kelley, S., Schmeckle, M.W., and Douglass, J. 2014 [Pediment response to drainage basin evolution in south-central Arizona](#). *Physical Geography* 35: 369-389.

149. Larson, P.H. and Dorn, R.I. 2014. [Strath development in small-arid watersheds: Case study of South Mountain, Sonoran Desert, Arizona](#). *American Journal of Science* 314: 1202-1223.

148. Harrison, E.J. and Dorn, R.I. 2014. [Introducing a terrestrial carbon pool in warm desert bedrock mountains, Southwestern USA](#). *Global Biogeochemical Cycles* 28: 253-268.

147. Krinsley, D.H., Ditto, J., Langworthy, K.A., Dorn, R.I., and Thompson, T.J. 2013. [Varnish microlaminations: New insights from focused ion beam preparation](#). *Physical Geography* 34: 159-173

146. Dorn, R.I., Krinsley, D.H., Langworthy, K.A., Ditto, J., and Thompson, T.J. 2013. [The influence of mineral detritus on rock varnish formation](#). *Aeolian Research* 10:61-76.

145. Dorn, R.I., Gordon, S., Krinsley, D., and Langworthy, K. 2013. [Nanoscale: mineral weathering boundary](#). In: Shroder, J. (Editor in Chief), Pope, G.A. (Eds), *Treatise on Geomorphology*. Academic Press, San Diego, CA, vol 4, *Weathering and Soils Geomorphology*, pp.: 70-97.

144. Dorn, R.I. 2013. [Rock Coatings](#). In: Shroder, J. (Editor in Chief), Pope, G.A. (Ed.), *Treatise on Geomorphology*. Academic Press, San Diego, CA, vol 4, *Weathering and Soils Geomorphology*, pp. 44-69.

143. Dorn, R.I., Gordon, S.J., Allen, C.D., Cervený, N., Dixon, J.C., Groom, K.M. Hall, K., Harrison, E., Mol, L., Paradise, T.R., Sumner, P., Thompson, T., and Turkington, A.V. 2013.

[The role of fieldwork in rock decay research: case studies from the fringe](#). *Geomorphology* 100: 59-74.

142. Moore, M.J., Kraetz, G., and Dorn, R.I. 2012. [Phoenix debris flow hazard assessment: House location matters](#). *Physical Geography* 33: 491-513.
141. Dorn, R. I., Dorn, J., Harrison, E., Gutbrod, E., Gibson, S., Larson, P., Cerveny, N. Lopat, N. Groom, K.M., and Allen, C. 2012 [Case hardening vignettes from the western USA: Convergence of form as a result of divergent hardening processes](#). *Association of Pacific Coast Geographers Yearbook* 74: 1-12.
140. Dorn, R.I., Gordon, M., Pagán, E.O., Bostwick, T.W., King, M. and Ostapuk, P. 2012. [Assessing early Spanish explorer routes through authentication of rock inscriptions](#). *Professional Geographer*. 64: 415-429.
139. Larson, P.H. and Dorn, R.I. 2012. [Painting Yosemite Valley: A Case study of rock coatings encountered at Half Dome](#). *Physical Geography* 33: 165-182.
138. Dorn, R.I. 2012. [Do debris flows pose a hazard to mountain-front property in metropolitan Phoenix, Arizona?](#) *Professional Geographer*, 64: 197-210.
137. Dorn, R.I., Krinsley, D.H., and Ditto, J. 2012. [Alexander von Humboldt's initiation of rock coating research](#). *Journal of Geology*, 120: 1-12.
136. Dorn, R.I. 2012. [Formation of silica glaze rock coatings through water vapor interactions](#). *Physical Geography* 33 (1): 21-31.
135. Krinsley, D.H., Dorn, R.I., DiGregorio, B.E., Langworthy, K.A., and Ditto, J. 2012. [Rock varnish in New York: An accelerated snapshot of accretionary processes](#). *Geomorphology*, 138: 339-351.
134. Whitley, D.S. & Dorn, R.I. 2012. — [The Earliest rock art in Far Western North America](#). In: CLOTTE J. (dir.), *L'art pléistocène dans le monde / Pleistocene art of the world / Arte pleistoceno en el mundo*, Actes du Congrès IFRAO, Tarascon-sur-Ariège, septembre 2010, Symposium « Art pléistocène dans les Amériques ». N° spécial de Préhistoire, Art et Sociétés, Bulletin de la Société Préhistorique Ariège-Pyrénées, LXV-LXVI, 2010-2011, CD: p. 585-590
133. Dorn, R.I. 2011. [Revisiting dirt cracking as a physical weathering process in warm deserts](#). *Geomorphology* 135: 129-142.
132. Ekiss, G.O., Dorn, R.U., Hinde, E.R., Douglass, J., and Trapido-Lurie, B. 2011. [Mathematics learning and geography education](#), in *Geographic Literacy in the United States: Challenges and Opportunities in the NCLB Era*, eds. G.S. Elbow, D.J. Rutherford, and C. Shearer, pp. 57-62.
131. Hinde, E.R. Osborn Popp, S.E., Ekiss, G.O., and Dorn, R.I. 2011. [Literacy Learning and Geography Education](#), in *Geographic Literacy in the United States: Challenges and Opportunities in the NCLB Era*, eds. G.S. Elbow, D.J. Rutherford, and C. Shearer, pp. 51-56.
130. Langworthy, K.A., Krinsley, D.H., and Dorn, R.I. 2011. [Investigation of Tibetan Plateau](#)

[varnish: New findings at the nanoscale using focused ion beam and transmission electron microscopy techniques](#). Scanning 33, 78-81.

129. Dorn, R.I. and Krinsley, D.H. 2011. [Spatial, temporal and geographic considerations of the problem of rock varnish diagenesis](#). Geomorphology, 130: 91-99.

128. Hinde, E.R., Popp, S.E., Jimenez-Silva, M. and Dorn, R.I. 2011. [Linking Geography to Reading and English Language Learners' Achievement in U.S. Elementary and Middle School Classrooms](#). International Research in Geographical & Environmental Education, 20: 47-63.

127. Langworthy, K., Krinsley, D.H., and Dorn, R.I. 2010. [High Resolution Transmission Electron Microscopy evaluation of silica glaze reveals new textures](#). Earth Surface Processes and Landforms, 35: 1615–1620.

126. Larson, P.H., Dorn, R.I., Douglass, J., Gootee, B.F., and Arrowsmith, R. 2010. [Stewart Mountain Terrace: A new Salt River terrace with implications for landscape evolution of the lower Salt River Valley, Arizona](#). Journal of the Arizona-Nevada Academy of Sciences, 42 (1): 26-36.

125. Dorn, R.I. 2010. [Debris flows from small catchments of the Ma Ha Tuak Range, metropolitan Phoenix, Arizona](#). Geomorphology 120: 339-352.

124. [Whitley, D.S. and Dorn, R.I. 2010. The Coso petroglyph chronology. Pacific Coast Archaeological Society Quarterly 43: 135-157.](#)

123. [Dorn, R.I. 2009. The rock varnish revolution: New insights from microlaminations and the contributions of Tanzhuo Liu. Geography Compass 3: 1804-1823.](#)

122. [Krinsley, D., Dorn, R.I., DiGregorio, B. 2009. Astrobiological Implications of Rock Varnish in Tibet. Astrobiology 9: 551-562.](#)

121. [Merrell, C.L. and Dorn, R.I. 2009. Indian Writing Waterhole and Tom's Spring: Two central Idaho petroglyph sites in the Great Basin tradition. American Indian Rock Art 35: 203-217.](#)

120. Dorn, R.I. 2009. [Desert rock coatings](#). In [Geomorphology of Desert Environments 2nd Edition](#) , ed. A.J. Parsons and A.D. Abrahams, Springer, chapter 7, pages 153-186.

119. Dorn, R.I. 2009. [Rock varnish and its use to study climatic change in geomorphic settings](#). In [Geomorphology of Desert Environments 2nd Edition](#) , ed. A.J. Parsons and A.D. Abrahams, Springer, chapter 22, pages 657-673.

118. Dorn, R.I. 2009. [The role of climatic change in alluvial fan development](#). In [Geomorphology of Desert Environments 2nd Edition](#) , ed. A.J. Parsons and A.D. Abrahams, Springer, chapter 24, pages 723-742.

117. Allen, C.D., Dorn, J., and Dorn, R.I. 2009. [Fire in the Desert: Initial Gullying Associated with the Cave Creek Complex Fire, Sonoran Desert, Arizona](#). Association of Pacific Coast Geographers Yearbook 71: 1-14.

116. Douglass, J, Meek, N., Dorn, R.I., Schmeekle, M.W. 2009. [A criteria-based](#)

[methodology for determining the mechanism of transverse drainage development, with application to southwestern USA](#). Bulletin of the Geological Society of America 121: 586-598. ([and data repository](#))

115. Allen, C.D., and Dorn, R.I. 2008. [Graduate degrees in geographic education: Exploring an online model](#). *California Geographer* 48: 3-19.

114. Mahaney, W.C., M.W. Milner, B. Kapran, P. Tricart, R.W. Barendregt, D.H. Krinsley, R.I. Dorn, B. Trapido-Lurie, S. Boccia, R.N.S. Sodhi, V. Kalm, and R. Beukens. 2008 Historical archaeology of the Hannibalic invasion of Italia: Technical Applications. [Technical Briefs in Historical Archaeology](#) 3: 39-47.

113. Mahaney, W.C., Kalm, V., Dirszowsky, Milner, M.W., Sodhi, R., Beukens, R., Dorn, R.I., Tricart, P., Schwartz, S., Chamorro-Perez, E., Boccia, S., Barendregt, R.W., Krinsley, D.H., Sequist, E.R., Merrick, D. and Kapran, B. 2008 [Hannibal's trek across the Alps: Identification of sties of geoarchaeological interest](#). *Mediterranean Archaeology & Archaeometry* 8 (2): 39-54.

112. Stumpf, R.J. II, Douglas, J., Dorn, R.I. 2008. [Learning desert geomorphology virtually versus in the field](#). *Journal of Geography in Higher Education* 32: 387-399.

111. Dorn, R.I., Whiley, D.S., Cerveny, N.V., Gordon, S.J. Allen, C. and Gutbrod, E. 2008. [The rock art stability index: A new strategy for maximizing the sustainability of rock art](#). *Heritage Management* 1: 35-70.

110. Hinde, E.R., Osborn Popp, S.E., Dorn, R.I., Ekiss, G.O., Mater, M., Smith, C.B., Libbee, M. 2007. [The integration of literacy and geography: The Arizona GeoLiteracy program's effect on reading comprehension](#). *Theory and Research in Social Education* 35: 343-365.

109. Mahaney, W.C., Milner, M.W., Sodhi, R., Dorn, R.I., Boccia, S., Beukens, R.P., Tricart, P., Schwartz, S., Chamorro-Perrez, E., Barendregt, R.W., Kalm, V., Dirszowsky, R.W. 2007. [Analysis of burnt schist outcrops in the Alps: Relation to historical archaeology and Hannibal's Crossing in 218 B.C.](#) *Geoarchaeology*, v. 22: 799-818.

108. Dorn, R.I. 2007. [Rock varnish, Geochemical Sediments and Landscapes](#), ed, D.J. Nash and S.J. McLaren, London: Blackwell, pp. 246-297. Chapter 8. ISBN 1-4051-2159-5.

107. 2007. Dorn, R.I. [Baking black opal in the desert sun: The importance of silica in desert varnish: COMMENT](#). *Geology*, v. doi: 10.1130/G23410C.1

106. Dorn, R.I. 2007. [Online Versus Hardcopy Textbooks](#). *Science*, v. 315: 1220.

105. Dorn, R.I. 2006. [Petroglyphs in Petrified Forest National Park: Role of rock coatings as agents of sustainability and as indicators of antiquity](#). *Bulletin of Museum of Northern Arizona* 63: 52-63 [W. G. Parker and P. A. Thompson, eds., 2006, *A Century of Research at Petrified Forest National Park: Natural and Cultural History*]

104. Cerveny, N.V., Kaldenberg, R., Reed, J., Whitley, D.S, Simon, J. and Dorn, R.I. 2006. [A New Strategy for Analyzing the Chronometry of Constructed Rock Features in Deserts](#). *Geoarchaeology* v. 21, No. 3: 281-303.

- [103. Dorn, R.I., Douglass, J.D., Ekiss, G.O., Trapido-Lurie, B., Comeaux, M., Mings, R., Eden, R., Davis, C. Hinde, E. and Ramakrishna. B. 2005. Learning geography promotes learning math: Results and implications of Arizona's GeoMath Grade K-9 Program. *Journal of Geography*, v. 104: 95-103.](#)
- [102. Gordon, S.J. and Dorn, R.I., 2005. In situ weathering rind erosion. *Geomorphology*, v. 67: 97-113.](#)
- [101. Gordon, S.J. and Dorn, R.I. 2005. Localized weathering: Implications for Theoretical and Applied Studies. *Professional Geographer*, v. 57: 28-43.](#)
- [100. Douglass, J., Dorn, R.I. and Gootee, B. 2005. A large landslide on the urban fringe of metropolitan Phoenix, Arizona. *Geomorphology*, v. 65: 321-336.](#)
- [99. Tratebas, A., Cervený, N., and Dorn, R.I. 2004. The effects of fire on rock art: Microscopic evidence reveals the importance of weathering rinds. *Physical Geography*, v. 25: 313-333.](#)
- [98. Dorn, R. 2004. Experimental approaches to dating petroglyphs and geoglyphs with rock varnish in the California Deserts: Current status and future directions. *The Human Journal & Ancient Life in California Deserts*, ed. M.W. Allen and J. Reed, Maturango Museum, Ridgecrest, 211-224.](#)
- [97. Selover, N.J., Dorn, D., Dorn, R.I. and Brazel, A.J. 2003. Community Partnership Grant Generates Pre-Service Teacher and Middle School Student Motivation for Authentic Science and Mathematics. *School Science and Mathematics*, v. 103 \(1\): 45-56.](#)
- [96. Dorn, R.I. 2003. Boulder weathering and erosion associated with a wildfire, Sierra Ancha Mountains, Arizona. *Geomorphology*, v. 55: 155-171](#)
- [95. Dorn, R.I., Ekiss, G.B., Ostapuk, M. and Davis, C. 2002. The status of geography education in Arizona. *International Research in Geographical and Environmental Education*, v. 11: 171-176. \(\[click here\]\(#\) for pdf version\)](#)
- [94. Dorn, R.I. 2002. Analysis of Geomorphology Citations in the Last Quarter of the 20th Century. *Earth Surface Processes and Landforms*, v. 27: 667-672.](#)
- [93. Frink, D.S. and Dorn, R.I. 2001. BEYOND TAPHONOMY: Pedogenic Transformations of the Archaeological Record in Monumental Earthworks. *Arizona-Nevada Academy of Sciences Journal*, v. 34: 24-44.](#)
- [92. Dorn, R.I. Stasack, E., Stasack, D., and Clarkson, P.B. 2001. Analyzing petroglyphs and geoglyphs with four new perspectives evaluating what's there and what's not. *American Indian Rock Art*, v. 27: 77-96.](#)
- [91. Dorn, R.I. 2001. Chronometric Techniques -- Rock Engravings. in *Handbook of Rock Art Research*, ed. DS Whitley, Walnut Creek, CA: AltaMira Press. pp. 167-189.](#)
- [90. Meek, N. and Dorn, R.I. 2000. Is mushroom rock a ventifact? *California Geology*, November/December Issue: 18-20.](#)
- [89. Whitley, D.S., Dorn, R.I., J.M., Rechtman, R., Whitley, T.L. 1999. Sally's Rockshelter](#)

[and the archology of the vision quest. Cambridge Archaeological Journal 9: 221-247.](#)

[88. Brady, P.V., Dorn, R.I., Brazel, A.J., Clark, J., Moore, R.B., Glidewell, T. 1999. Direct measurement of the combined effects of lichen, rainfall, and temperature on silicate weathering. Geochimica et Cosmochimica Acta 63, 3293-3300.](#)

87. Whitley, D.S., Simon, J.M., and Dorn, R.I., 1999, Vision quest in the Coso Range. [American Indian Rock Art 25, 1-31](#)

[86. Fein, J.B., Brady, P.V., Jain, J.C., Dorn R.I., and Lee, J.-U., 1999, Bacterial effects on the mobilization of cations from a weathered Pb-contaminated andesite. Chemical Geology 158, 189-202.](#)

85. 1998. Dorn, R.I. Response. [Science 280: 2136-2139.](#)

84. 1998. Dorn, R.I. Age determination of the Coso Rock Art, Chapter 3, [Coso Rock Art. A New Perspective](#), ed. J.W. Baird and E. Younkin, Maturango Museum, Ridgecrest, 69-96.

[83. 1997. Kuby, M., Cervený, R.S. and Dorn, T.I. A new approach to paleoclimatic research using Linear Programming. Paleogeography, Paleoclimatology, Paleoecology, 129: 251-267](#)

82. 1997. Welsh, P.H. and Dorn, R.I. [Critical analysis of petroglyph radiocarbon ages from Coa, Portugal and Deer Valley, Arizona. American Indian Rock Art 23: 11-23.](#) [Presented at the May 24-27, 1996 ARARA Conference in El Paso, Texas.]

81. [1997. Dorn, R.I. Constraining the age of the Côa valley \(Portugal\) engravings with 14C. Antiquity 71: 105-115.](#)

80. [1997. Shaffer, J.A., Cervený, R.S., Dorn, R.I. Radiation windows as indicators of an astronomical influence on the Devil's Hole Chronology. Geology, 24: 1017-1020.](#)

79. 1996. Dorn, R.I. [Uncertainties in 14C ages for petroglyphs from the Olary province, South Australia. Archaeology in Oceania 31: 214-215.](#)

78. [1996. Dorn, R.I. Uncertainties in the radiocarbon dating of organics associated with rock varnish: A plea for caution. Physical Geography 17: 585-591.](#)

77. [1996. Dorn, R.I. Radiocarbon dating glacial moraines with the aeolian biome: test results at Bishop Creek, Sierra Nevada, California. Physical Geography 17: 157-179.](#)

76. [1996. Dorn, R.I. Climatic Hypotheses of Alluvial-Fan Evolution in Drylands are Not Testable, in The Role of the Philosophy of Science in Geomorphology, ed. B. Rhoads and C. Thorn, Binghamton Geomorphology Series, Chapman & Hall, 191-220.](#)

[75. 1996. Liu, T. and Dorn, R.I. Understanding the spatial variability of environmental change in drylands with rock varnish microlaminations. Annals of the Association of American Geographers 86: 187-212.](#)

74. [1996. Stasack, E., Dorn, R.I. and Lee, G. First direct 14C ages on Hawaiian petroglyphs. Asian Perspectives 35: 51-72.](#)

73. [1995. Dorn, R.I. Alterations of Ventifact Surfaces at the Glacier/Desert Interface. Desert](#)

[Aeolian Processes, ed. V. Tchakerian, Chapman and Hall, pp. 199-217.](#)

72. [1995. Villa, N., Dorn, R.I. and Clark, J. Fine material in rock fractures: aeolian dust or weathering? Desert Aeolian Processes, ed. V. Tchakerian, Chapman and Hall, pp. 219-231.](#)

71. [1995. Dorn, R.I. and Meek, N. Rapid formation of rock varnish and other rock coatings on slag deposits near Fontana, California. Earth Surface Processes and Landforms 20: 547-560.](#)

70. [1995. von Werlhof, J., Casey, H., Dorn, R.I., and Jones, G.A. AMS ¹⁴C age constraints on geoglyphs in the lower Colorado River region, Arizona and California. Geoarchaeology 10 \(4\): 257-273.](#)

69. [1995. Clarkson, P.B. and Dorn, R.I. New chronometric dates for the puquios of Nasca, Peru. Latin American Antiquity 6\(1\): 56-69.](#)

68. [1995. Dorn, R.I. and Brady, P.V. Rock-based measurement of temperature-dependent plagioclase weathering. Geochimica et Cosmochimica Acta 59 \(13\): 2847-2852.](#)

67. [1995. Dorn, R.I. Digital processing of backscatter electron imagery: A microscopic approach to quantifying chemical weathering. Geological Society of America Bulletin 107 \(6\): 725-741.](#)

66. [1995. Pope, G., Dorn, R.I., Dixon, J. A new conceptual model for understanding geographical variations in weathering Annals of the Association of American Geographers 85 \(1\): 38-64.](#)

65. [1995. Peterson, F., Bell, J. Dorn, R., Ramelli, A., Ku, T.L. Late Quaternary geomorphology and soils in Crater Flat, Yucca Mountain area, southern Nevada. Geological Society of America Bulletin 107 \(8\): 379-395.](#)

64. [1995. Krinsley, D., Dorn, R.I., Tovey, N.K. Nanometer-scale layering in rock varnish: implications for genesis and paleoenvironmental interpretation. Journal of Geology, v. 103: 106-113.](#)

63. [1994. Dorn, R.I. Surface exposure dating with rock varnish. In Dating in Exposed and Surface Contexts, ed. C. Beck, University of New Mexico Press, Albuquerque pp.77-113.](#)

62. [1994. Dorn, R.I. and Krinsley, D. New perspectives on colluvial boulder deposits in the Southwestern Great Basin, USA. Physical Geography 15: 62-79.](#)

61. [1994. Dorn, R.I. Dating petroglyphs with a 3-tier rock varnish approach. In New Light on Old Art: Advances in Hunter-Gatherer Rock Art Research, ed. D.S. Whitley and L. Loendorf, UCLA Institute for Archaeology Monograph Series, no. 36, pp. 12-36.](#)

60. [1994. Dorn, R.I. Rock varnish as an indicator of climatic change. In Geomorphology of Desert Environments, ed. A.D. Abrahams and A.J. Parsons, Chapman & Hall, pp. 539-552](#)

59. [1994. Dorn, R.I. Alluvial fans as an indicator of climatic change. In Geomorphology of Desert Environments, ed. A.D. Abrahams and A.J. Parsons, Chapman & Hall, pp. 593-615.](#)

58. [1993. Francis, J., Loendorf, L., and Dorn, R.I. Results of AMS radiocarbon and cation](#)

[ratio dating of rock art in the Bighorn Basin of Wyoming and Montana: New advances for rock art studies. *American Antiquity* 58: 711-737.](#)

[57. 1993. Whitley, D.S. and Dorn, R.I. New perspectives on the Clovis versus Pre-Clovis controversy. *American Antiquity*: 58: 626-647.](#)

56. 1993. Wasklewicz, T., Dorn, R.I., Clark, S., Hetrick, H., Pope, G., Liu, T., Krinsley, D., Dixon, J. Moore, R. and Clark, J. [Olivine does not necessarily weather first. *Journal of Tropical Geography* 14\(1\): 72-80.](#)

[55. 1993. Nishiizumi, K., Kohl, C.P., Arnold, J.R., Dorn, R., Klein, J., Fink, D., Middleton, R., and Lal, D. Role of *in situ* ¹⁰Be and ²⁶Al in the study of diverse geomorphic processes. *Earth Surface Processes and Landforms*, v. 18: 407-425 cosmogenic nuclides .](#)

54. 1993. Dorn, R.I., Jones, A., Bock, F., and Bock, A.J. Preliminary Data on Radiocarbon Dating Petroglyphs at Petrified Forest National Park, Arizona [American Indian Rock Art](#) 19: 31-39.

53. 1993. Nobbs, M.F. and Dorn, R.I. New surface exposure ages for petroglyphs from the Olayr Province, South Australia. [Archaeology in Oceania](#) 28: 18-39.

[52. 1992. Dorn, R.I., Krinsley, D.H., Liu, T., Anderson, S., Clark, J., Cahill, T.A., and Gill, T.E. 1992. Manganese-rich rock varnish does occur in Antarctica. *Chemical Geology* 99: 289-298.](#)

[51. 1992. Hooke, R.LeB. and Dorn, R.I. Segmentation of alluvial fans in Death Valley, California: New Insights from surface-exposure dating. *Earth Surface Processes and Landforms* 17: 557-574.](#)

50. 1992. Dorn, R.I. A review of rock varnish dating of rock engravings. [International Newsletter on Rock Art](#) 2: 10-14.

[49. 1992. Dorn, R.I. Paleoenvironmental signals in rock varnish on petroglyphs. *American Indian Rock Art* 18: 1-17.](#)

48. 1992. Dorn, R.I. and Clark, S. [Spatial organization in the landforms of Death Valley. *Geographical Snapshots of North America*, ed. R.G. Janelle, International Geographical Congress Special Publication, 362-366.](#)

47. 1992. Dorn, R.I. and Nobbs, M. Further support for the antiquity of South Australian rock engravings. [Australian Aboriginal Studies](#): No. 1: 56-60.

[46. 1992. Dorn, R.I., Clarkson, P.B., Nobbs, M.F., Loendorf, L.L., and Whitley, D.S. Radiocarbon dating inclusions of organic matter in rock varnish, with examples from drylands. *Annals of the Association of American Geographers* 82: 136-151.](#)

45. 1992. Dorn, R.I., Jull, A.J.T., Donahue, D.J., Linick, T.W., Toolin, L.J., Moore, R.B., Rubin, M., Gill, T.E., and Cahill, T.A. [Rock Varnish on Hualalai and Mauna Kea, Volcanoes, Hawaii. *Pacific Science* 46: 11-34.](#)

44. 1991. Krinsley, D.H. and Dorn, R.I. New eyes on Eastern California varnish. [California Geology](#) 44(5): 107-114.

43. [1991. Dorn, R.I. and Phillips, F.M. Surface exposure dating: review and critical evaluation. *Physical Geography* 12: 303-333.](#)
42. [1991. Phillips, F.M., Zreda, M.G., Smith, S.S., Elmore, D., Kubik, P.W., Dorn, R.I., and Roddy, D.J. Age and geomorphic history of Meteor Crater, Arizona, from Cosmogenic Cl-36 and Rock Varnish C-14. *Geochimica Cosmochimica Acta* 55: 2695-2698.](#)
41. 1991. Clarkson, P.B., and Dorn, R.I. Nuevos datos relativos a la antigüedad de los geoglifos y pukios de Nazca, Peru. *Boletín de Lima*, v. 13 (78): 33-45. (Published in 1992)
40. [1991. Dorn, R.I., and Krinsley, D.H. Cation-leaching sites in rock varnish. *Geology* 19: 1077-1080.](#)
39. [1991. Dorn, R.I. Rock varnish. *American Scientist* 79: 542-553.](#)
38. [1991. Dorn, R.I., Phillips, F.M., Zreda, M.G., Wolfe, E.W., Jull, A.J.T., Kubik, P.W. and Sharma, P. Glacial chronology of Mauna Kea, Hawaii, as constrained by surface-exposure dating. *National Geographic Research and Exploration* 7: 456-471.](#)
37. 1991. Zreda, M.G., Phillips, F.M., Elmore, D., Kubik, P.W., Sharma, P., and Dorn, R.I. Cosmogenic chlorine-36 production rates in terrestrial rocks. *Earth and Planetary Science Letters* 105: 94-109.
36. 1990. Kearns, T., Dorn, R.I., Stanford, D. Potential of cation-ratio dating for analyzing the ages of artifacts in southeastern Utah. *Current Research in the Pleistocene* 7: 84-87.
35. 1990. Dorn, R.I., McGlone, W.R., Leonard, P.M. [Age-determination of petroglyphs on sandstone, southeast Colorado, using the cation-ratio method of dating rock varnish. *Southwestern Lore* 56\(2\): 21-36.](#)
34. 1990. Dorn, R.I., Cahill, T.A., Eldred, R.A., Gill, T.E., Kusko, B.H., Bach, A.J., and Elliott-Fisk, D.L. [Dating rock varnishes by the cation ratio method with PIXE, ICP, and the electron microprobe. *International Journal of PIXE* 1: 157-195.](#)
33. 1990. Dorn, R.I. and Dragovich, D. [Interpretation of rock varnish in Australia: Case studies from the arid zone. *Australian Geographer*. 21: 18-32.](#)
32. 1990. Benson, L.V., Currey, D.R., Dorn, R.I., Lajoie, K.R., Oviatt, C.G., Robinson, S.W., Smith, G.I., Stine, S. and Thompson, R.S. Chronology of expansion and contraction of four great basin lake systems during the past 35,000 years. *Palaeogeography, Palaeoclimatology, Palaeoecology*. 78: 241-286.
31. 1990. Dorn, R.I., Jull, A.J.T., Donahue, D.J., Linick, T.W., Toolin, L.J. Latest Pleistocene lake shorelines and glacial chronology in the western Basin and Range Province, USA: Insights from AMS radiocarbon dating of rock varnish and paleoclimatic implications. *Palaeogeography, Palaeoclimatology, Palaeoecology*. 78: 315-331.
30. [1990. Krinsley, D.H., Dorn, R.I. and Anderson, S. Factors that may interfere with the dating of rock varnish. *Physical Geography*, v. 11: 97-119.](#)
29. [1990. Dorn, R.I. Quaternary alkalinity fluctuations recorded in rock varnish microlaminations. *Palaeogeography, Palaeoclimatology, Palaeoecology* 76 : 291- 310.](#)

28. [1989. Dorn, R.I. Cation-ratio dating: a geographic assessment. *Progress in Physical Geography* 13: 559-596.](#)
27. [1989. Dorn, R.I. and Dickinson, W.R. First paleoenvironmental interpretation of a pre-Quaternary rock varnish site, Davidson Canyon, south Arizona. *Geology* 17: 1029-1031.](#)
26. 1989. Dorn, R.I., Jull, A.J.T., Donahue, D.J., Linick, T.W. and Toolin, L.J. Accelerator mass spectrometry radiocarbon dating of rock varnish. *Geological Society of America Bulletin* 101:1363-1372.
25. 1988. Bamforth, D.B. and Dorn, R.I. [On the nature and antiquity of the Manix Lake Lithic Industry. *Journal of California and Great Basin Anthropology*. 10: 209-226.](#)
24. [1988. Whitley, D.S. and Dorn, R.I. Cation-ratio dating of petroglyphs using PIXE. *Nuclear Instruments and Methods in Physics Research B*35: 410-414.](#)
23. 1988. Nobbs, M. and Dorn, R.I. Age-determinations for rock varnish formation within petroglyphs: cation-ratio dating of 24 motifs from the Olary region of arid South Australia. *Rock Art Research* 5: 108-26,133-9,144-6.
22. [1988. Dorn, R.I., Nobbs, M., Cahill, T.A. Cation ratio dating of rock engravings from the Olary Province of arid South Australia. *Antiquity* 62: 681-689](#)
21. [1988. Dorn, R.I. A rock varnish interpretation of alluvial-fan development in Death Valley, California. *National Geographic Research* 4: 56-73.](#)
20. 1987. Dorn, R.I., Turrin, B.D., Jull, A.J.T., Linick, T.W., and Donahue, D.J. Radiocarbon and cation-ratio ages for rock varnish on Tioga and Tahoe morainal boulders of Pine Creek, eastern Sierra Nevada in California, and Paleoclimatic Implications. *Quaternary Research* 28: 38-49.
19. [1987. Whitley, D.S. and Dorn, R.I. Rock art chronology in eastern California. *World Archaeology* 19: 150-164.](#)
18. 1987. Dorn, R.I., Tanner, D., Turrin, B.D. and Dohrenwend, J.C. Cation-ratio dating of Quaternary materials in the east-central Mojave Desert, California. *Physical Geography* 8: 72-81.
17. 1987. Dorn, R.I., DeNiro, M.J. and Ajie, H.O. [Isotopic evidence for climatic influence on alluvial-fan development in Death Valley, California. *Geology* 15: 108-110.](#)
16. [1986. Dorn, R.I. Rock varnish as an indicator of aeolian environmental change. In *Aeolian Geomorphology*, ed. W.G. Nickling, Allen & Unwin, London, pp. 291- 307.](#)
15. 1986. Reneau, S.L., Dietrich, W.E., Dorn, R.I., Berger, C.R., and Rubin, M. Geomorphic and paleoclimatic implications of latest Pleistocene radiocarbon dates from colluvium-mantled hollows, California. *Geology* 14: 655-658.
14. 1986. Dorn, R.I. (first author with 11 co-authors). Cation-ratio and accelerator-radiocarbon dating of rock varnish on Mojave artifacts and landforms. *Science* 231: 830-833.
13. [1985. Dorn, R.I. and DeNiro, M.J. Stable carbon isotope ratios of rock varnish organic](#)

[matter: a new paleoenvironmental indicator. Science 227: 1472-1474.](#)

12. 1984. Dorn, R.I. Geomorphological interpretation of rock varnish in the Mojave Desert. In Surficial Geology of the Eastern Mojave Desert, California, ed. J.C. Dohrenwend, Geological Society of America, Reno, pp. 69-87.

11. [1984. Dorn, R.I. Cause and implications of rock varnish microchemical laminations. Nature 310: 767-770.](#)

10. [1984. Dorn, R.I. and Whitley, D.S. Chronometric and relative age-determinations of petroglyphs in the western United States. Annals of the Association of American Geographers 74: 308-322.](#)

9. [1984. Dietrich, W.E. and Dorn, R.I. Significance of thick deposits of colluvium on hillslopes: a case study in the coastal mountains of northern California. Journal of Geology 92: 147-158.](#)

8. 1983. Whitley, D.S. and Dorn, R.I. [Chemical and micromorphological analysis of rock art pigment. Journal of New World Archaeology 6 \(3\): 48-51.](#)

7. 1983. Dorn, R.I. and Whitley, D.S. Cation-ratio dating of petroglyphs from the western Great Basin, North America. Nature 302: 816-818.

6. 1983. Dorn, R.I. [Cation-ratio dating: a new rock varnish age-determination technique. Quaternary Research 20: 49-73.](#)

5. [1982. Dorn, R.I. and Oberlander, T.M. Rock varnish. Progress in Physical Geography 6: 317-367.](#)

4. 1982. Dorn, R.I. Enigma of the desert. Environment Southwest 297: 3-5. (reprinted in Desert Protective Council Educational Bulletin 82-3)

3. 1982. Dorn, R.I. Observations on the use of "desert varnish" in the age-determination of surfaces. Society California Archaeology Bulletin 16 (1): 15- 18.

2. 1981. Dorn, R.I. and Oberlander, T.M. Rock varnish origin, characteristics and usage. Zeitschrift fur geomorphologie 25: 420-436.

1. [1981. Dorn, R.I. and Oberlander, T.M. Microbial origin of rock varnish. Science 213: 1245-1247.](#)

Edited Electronic Computer Capstones:

Jimenez-Silva, M., Hinde, E.R., Ekiss, G.O. and Dorn, R.I. (2010, Version 1.0). A virtual GeoLiteracy workshop on teaching geography and English language learners. Tempe, AZ: Arizona Geographic Alliance.

Hinde, E.R., Jimenez-Silva, M., Ekiss, G.O., Dorn, R.I., Osborn Popp, S.E., Managing Editors, (2009, Version 5.4). *GeoLiteracy ELL Adaptations: Integrating Geography, Reading and Writing*. Tempe, AZ: Arizona Geographic Alliance. **Winner of the 2010 Geography Excellence in Media Award from the National Council for Geographic Education.**

Hinde, E.R., Ekiss, G.O., and Dorn, R.I., Managing Editors (2007 CD Version 3.1). [GeoMath: Integrating Geography and Mathematics](#). Arizona Geographic Alliance, Arizona State University, Tempe, Arizona.

Non Refereed Publications

50. 2018. Mahaney, B., Langowrthy, K., Fischer, R., Dorn, R. 2018. [In memory of Professor David Krinsley](#), University of Oregon. *Studio Quaternaria* 35 (1): in press.
49. 2017. Larson, P.L. and Dorn, R.I. [Radiometric dating/techniques](#). The International Encyclopedia of Geography: People, the Earth, Environment, and Technology. Association of American Geographers.
48. 2017. Thompson, T.J. and Dorn, R.I. [Weathering processes and landforms](#). The International Encyclopedia of Geography: People, the Earth, Environment, and Technology. Association of American Geographers.
47. 2010. Dorn, Ronald I. "[Desert Varnish](#)." Encyclopedia of Geography. SAGE Publications. 1 Oct. 2010.
<http://www.sage-ereference.com/geography/Article_n276.html>.
46. [2008. Dorn, R.I. Desert varnish as a paleoclimate proxy, in Encyclopedia of Paleoclimatology and Ancient Environments, ed. V. Gornitz, Springer. Entry 00067.](#)
45. 2007. Ostapuk, P., Page, J., King, M., Dorn, R.I. Authenticating efforts related to a 1776 Spanish Inscription at Glen Canyon. Proceedings paper, [Spanish Trails of the American West](#), a symposium organized and sponsored by the Old Spanish Trail Association, Cedar City, Utah. 34 pp.
44. 2007. Whitley, D.S., Simon, J.M., Cervený, N., Dorn, R.I. [High-stand shoreline survey in the Searles Lake area, San Bernardino County, California](#), in [A Festschrift Honoring the Contributions of California Archaeologist Jay von Werlhof](#), ed. R.L. Kaldenberg, Maturango Museum Publication No. 20, Maturango Museum: Ridgecrest, CA, 209-224.
43. 2006. Dorn, R.I. Arizona, in chapter "Geographical Education in North America (Canada and the United States)" by Bednarz, S., Bednarz, R., Mansfield, T.D., Semple, S., Dorn, R. and Libbee, M., in [Geographical Education in a Changing World: Past Experience, Current Trends, and Future Challenges](#), ed John Lidstone and Michael Williams, Special Publication IGU Brisbane, Springer: Amsterdam, 107-126.
- [42. 2006. Stasack, E., Dorn, R. and Lee, G. The petroglyphs of Kaho'olawe Island, Hawai'i. IRAC Proceedings, Rock Art - Work Heritage, section editor G. Lee, American Rock Art Research Association, p. 137-144.](#)
41. [2005. Dorn, R.I. Review of The Geomorphic evolution of Yosemite Valley and Sierra Nevada Landscapes: Solving the Riddles in the Rocks, J.P. Shaffer, Wilderness Press \(1997\) in Annals of the Association of American Geographers 95 \(2\): 491-493.](#)
- [40. 2005. Dorn, R.I. Why testify for the defense? La Pintura 31 \(2\): 8-13.](#)

39. [2004. Gordon, S. and Dorn, R.I. Weathering rinds, in Encyclopedia of Geomorphology, ed. A.S. Goudie, Routledge: London, 853-855.](#)
38. [2004. Dorn, R.I. Case hardening, in Encyclopedia of Geomorphology, ed. A.S. Goudie, Routledge: London, 118-119.](#)
37. [2004. Dorn, R.I. Geomorphological role of fire, in Encyclopedia of Geomorphology, ed. A.S. Goudie, Routledge: London, 367-370.](#)
36. [2004. Dorn, R.I. Desert varnish, in Encyclopedia of Geomorphology, ed. A.S. Goudie, Routledge: London, 251-254.](#)
35. [2004. Dorn, R.I. Rock coatings, in Encyclopedia of Geomorphology, ed. A.S. Goudie, Routledge: London, 870-873.](#)
34. [2000. Meek, N. and Dorn, R.I. Is Mushroom Rock a ventifact? California Geology. November-December Issue, 18-20.](#)
33. 2000. Dorn, R. Rock varnish. in [Dictionary of Physical Geography](#), ed. D.S.G. Thomas and A. Goudie, Blackwell: London, p. 417 & 2000. Dorn, R. Rock coatings. in [Dictionary of Physical Geography](#), ed. D.S.G. Thomas and A. Goudie, Blackwell: London, p. 417-419
32. 2000. Dorn, R. Sieve deposits. in [Dictionary of Physical Geography](#), ed. D.S.G. Thomas and A. Goudie, Blackwell: London, p. 444
31. 2000. Dorn, R. Rock-art dating. in [Archaeological method and theory](#), ed. L Ellis, Garland Publishing: New York. pp. 523-527.
30. 1997. Dorn, D. and Dorn, R. Basic Map Reading. Arizona Geographic Alliance, 64 pp. (Also distributed to K-12 Teachers as a part of February 1998 GeoDayTrip Outreach Field Trip)
29. 1996. Dorn, R. A change of perception. [La Pintura](#) 23 (2): 10-11.
28. 1996. Bach, A., Dorn, R., Liu, T., Phillips, F.M., Zreda, M., Elmore, D. Elliott-Fisk, D. and Clark, J. Last 200,000 years of glacial history at Bishop Creek, Eastern Sierra Nevada, California. [U.S. Geological Survey Circular](#) 1119: 9-11.
27. 1996. [Rock Varnish Microlaminations as a Paleoclimatic Indicator in Drylands](#). Educational Slide Set, Paleoclimatic Program, NOAA National Geophysical Data Center, Boulder, Colorado.
26. 1996. Dorn, R.I. Review of [Rock Weathering and Landform Evolution](#), ed. D.A. Robinson, and R.B.G. Williams, Wiley (1994) in [Annals of the Association of American Geographers](#) 86: 146-147.
25. 1996. Dorn, R.I. In the dog house. [La Pintura](#) 22 (2): 11-14.
24. 1996. Dorn, R.I. Radiocarbon dating. In [1996 McGraw-Hill Yearbook of Science & Technology](#), ed. S.P. Parker, McGraw-Hill, p. 288-230.
23. 1995. Dorn, R.I. Comment on "Evidence suggesting that methods of rock-varnish cation-

ratio dating are neither comparable nor consistently reliable". Quaternary Research 43: 272-273.

22. 1993. Dorn, R.I. Review of Geomorphic responses to climatic change, W.B. Bull, Oxford University Press (1991) in Progress in Physical Geography 17: 377-378.

21. [1992. Bach, A.J., Dorn, R.I., Elliott-Fisk, D.L. and Phillips, F.M. 1992. Glacial Avulsion in Pleistocene moraine complexes of the East-central Sierra Nevada, California. In The History of Water: Eastern Sierra Nevada, Owens Valley, White-Inyon Mountains White Mountains Research Station Symposium Volume 4, ed. C.A. Hall, Jr., V. Doyle-Jones and B. Wadawski, University of California Press, Los Angeles, pp. 17-31.](#)

20. 1992. Dorn, R.I. and Krinsley, D.J. Reply to comment on "Cation-leaching sites in rock varnish". Geology 20: 1051-1052.

19. 1992. Dorn, R.I. Comment. Geology 20: 470-471.

18. 1992. Dorn, R.I. Comment. Geology 20: 283.

17. 1992. Meek, N. and Dorn, R.I. Regional geomorphology: Las Vegas to San Diego. Field Trip Guide #1, Annual Meeting of the Association of American Geographers. San Diego, Ca. April 15-18, 1992. 92 pp.

16. 1991. Dorn, R.I. Letter to editor. American Scientist 80: 112-113.

15. 1991. Dorn, R.I., Dixon, J.C., and Orme, A.R. Integrating geomorphic processes and landscape evolution: an editorial. Physical Geography 12: 301-2.

14. 1991. Dorn, R.I. A discussion on the ethics of sampling petroglyphs for dating. La Pintura, v. 18(2), p. 6. (Translated and reprinted in Boletin Sociedad de Investigacion del Arte Rupestre de Bolivia, 1992, no. 1 issue)

13. [1991. Dorn, R.I. and Clark, J. Thinking on the run. Nature \(London\) 352: 10.](#)

12. 1991. Phillips, F.M., and Dorn, R.I. Penrose Conference Report on New Methods of Dating Geomorphic Surfaces. GSA Today 1:102.

11. 1991. Dorn, R.I. Reply (to comment on Accelerator Mass Spectrometry Radiocarbon Dating of Rock Varnish), Geological Society of America Bulletin 103: 312-314.

10. 1990. Dorn, R.I. Rock varnish dating of rock art: State of the art perspective. La Pintura 17(2): 1-2, 10-11.

9. 1990. Phillips, F.M. and Dorn, R.I. Geological Society of America, Penrose Conference Field Guide, "New Methods in Surface Exposure Dating", Mammoth Lakes, October 12-17, 35 pp.

8. 1990. Nobbs, M. and Dorn, R.I. Reply to Further Invited Comments on "Age-determinations for rock varnish formation within petroglyphs: cation-ratio dating of 24 motifs from the Olary region of arid South Australia." Rock Art Research: 7: 51- 52.

7. 1989. Nobbs, M. and Dorn, R.I. Reply to Further Invited Comments on "Age-

determinations for rock varnish formation within petroglyphs: cation-ratio dating of 24 motifs from the Olary region of arid South Australia." Rock Art Research 6: 63- 67.

6. [1989. Dorn, R.I. Comment on "A note of the characteristics and possible origins of desert varnishes from SE Morocco" by B.J. Smith and W.B. Whalley. Earth Surface Processes and Landforms. 14: 167-170.](#)

5. 1988. Nobbs, M. and Dorn, R.I. Reply to Invited Comments on "Age-determinations for rock varnish formation within petroglyphs: cation-ratio dating of 24 motifs from the Olary region of arid South Australia." Rock Art Research 5: 143-144.

4. 1988. Dorn, R.I. Reply to letter by A. Gillespie on "Radiocarbon and cation-ratio ages for rock varnish on Tioga and Tahoe morainal boulders of Pine Creek, eastern Sierra Nevada in California, and Paleoclimatic Implications. Quaternary Research 30:104-105.

3. 1987. Dorn, R.I., DeNiro, M.J., and Ajie, H.O. 1987. Reply to comment by Wells and McFadden on "Isotope evidence for climatic influence on alluvial-fan development in Death Valley, California. Geology 15: 1179-1180.

2. 1987. Dorn, R.I. Review of Geomorphology and Soils, ed. K.S. Richard, R.R. Arnett and S. Ellis, Allen & Unwin (1985) in Professional Geographer 39: 124.

1. 1987. Dorn, R.I. Response to Presentation of the Kirk Bryan Award. Geological Society of America Bulletin 99: 155.

Courses Taught

ASU 101

Introduction to Physical Geography

Society and Environment

Freshman Seminar for Learning Community on Sustainability

Field Methods

Teacher Training Workshops

Applied Geomorphology

Introduction to Landform Processes

Regional Geomorphology

Quaternary Environments

Principles of Remote Sensing

Digital Image Processing

Landforms of the Western United States

Environmental Change

Weathering Seminar

Field/Lab Methods in Quaternary Research

Physical Geography Forum

ST: Desert Geomorphology

Introduction to Research Methods

Honors, Physical Geography

Global Change

Physical Geography Seminar

Teaching Geography Standards

Rock Coatings

Research on Teaching College Geography

Field Methods

Core Courses for Masters of Advanced Study in Geographic Education (Introduction to Geographic Teaching, Physical Geography for Teachers, Human Geography for Teachers, Geographic Techniques for Teachers, World Geography for Teachers, North American Geography for Teachers, Geography Across the Curriculum)

Theses and Dissertations Supervised or Co-Supervised

Student	Title	Year, Degree	First Appointment After Degree
Peter Goodwin	Geomorphic interpretation of digital SPOT imagery; Hanaupah Canyon alluvial fan, Death Valley, California	1988, M.A. Thesis Texas Tech University	Chevron Overseas Remote Sensing Unit, San Francisco
Steve Stadelman	Pedogenesis and geomorphology of Hanaupah Canyon alluvial fan, Death Valley, California	1989, M.A Thesis Texas Tech University	Ph.D. Student, Texas Tech University
Gregory Pope	Quartz decrystallization in glacial tills, eastern Sierra Nevada, California	1990, M.A. Thesis, Arizona State University	Ph.D. Student at Arizona State University
Thad Wasklewicz	Importance of environment on basalt weathering, Hawaii	1992, M.A. Thesis Arizona State University	Ph.D. Student at Arizona State University
Thomas R. Paradise	Weathering-constrained erosion of sandstone at the Roman Theater, Petra Jordan	1993, Ph.D. Dissertation, Arizona State University	Assistant Professor at University of Hawaii at Hilo
Gregory Pope	A weathering boundary layer model to	1994, Ph.D. Dissertation, Arizona State	Assistant Professor

	interpret spatial variation in quartz weathering	University	Montclair State University
Tanzhuo Liu	Visual microlaminations in rock varnish: a new paleoenvironmental and geomorphic tool in drylands	1994, Ph.D. Dissertation, Arizona State University	Postdoctoral Fellow at Lamont-Doherty Earth Observatory, Columbia University
Molly Pohl	Radiocarbon dating in drylands	1995, M.A. Thesis, Arizona State University	NSF Graduate Fellow, Ph.D. Student at Arizona State University
Steve Gordon	Assessing the effects of temperature on plagioclase weathering, Iztaccihuatl, Mexico	1996, M.A. Thesis, Arizona State University	Ph.D. Student at Arizona State University
Donald Friend	Evolution of desert colluvial boulder fields, eastern California	1997, Ph.D. Dissertation, Arizona State University	Assistant Professor, Mankato State University (Now Minnesota State University)
Steve Gordon	An analysis of volcanic glass weathering, El Malpais National Monument, New Mexico, USA	1999, Ph.D. Dissertation, Arizona State University	Assistant Professor, United States Air Force Academy, Colorado Springs
Nicole Cerveny	Relationships between internal fractures and surface microtopography of quartz grains	2000, M.A. Thesis, Arizona State University	Instructor, Scottsdale Community College
Brandon Vogt	Weathering of a tombstone sphere, Tempe,	2000, M.A. Thesis, Arizona State	Ph.D. Student Arizona State University

	Arizona	University	
Michael Henze	Sediment yield on Spook Hill Pediment, Arizona	2000, M.A. Thesis, Arizona State University	Consultant, J.E. Fuller
Lorenzo Vazquez Selem	Glacial Chronology of Iztaccihuatl Volcano, Central Mexico. A Record of Environmental Change on the Border of the Tropics	2000, Ph.D. Dissertation, Arizona State University	Research Professor, UNIVERSIDAD NACIONAL AUTÓNOMA DE MÉXICO, Mexico City
Mike Applegarth	Interpretation of pediment form using geographic information technology and field data	2001. Ph.D. Dissertation, Arizona State University	Assistant Professor, Shippensburg State University
Evan Palmer	Feasibility and implications of a rock coating catena: Analysis of a desert hillslope	2002, M.A. Thesis, Arizona State University	United States Air Force
Kathryn Anne Gross	Analysis of lateral channel stability for a portion of New River, Arizona, Between 1964-2000	2002, M.A. Thesis, Arizona State University	Hydrologist, Maricopa County Flood Control District
Daniel A. Gilewitch	Military Geography: The Interaction of Desert Geomorphology and Military Operations	2003, Ph.D. Dissertation, Arizona State University	Assistant Professor, United States Army Military Academy, West Point
Kevin A. Green	Debris slope/pediment adjustment to	2003, M.A. Thesis, Arizona State	Ph.D. Student, University of Oregon

	hydraulic processes through analyses of particle size-slope relations in different lithologies	University	
Rebecca S. Beard	Stream channel change in response to cattle exclosures in semi-arid riparian ecosystems	2003, M.A. Thesis, Arizona State University	Research Assistant, Ecuadorian Andes Land Use Change Project, University of Texas, Austin
Kathleen M. Bergmann	Urban impacts on Rillito Creek	2004, M.A. Thesis, Arizona State University	Army Corp of Engineers
John C. Douglass	Criterion approach to transverse drainages	2005, Ph.D. Dissertation, Arizona State University	Full-time instructor, Paradise Valley Community College, Paradise Valley, Arizona
Susan Johnson	Combining geography instruction with reading: Exploring the interplay in 3rd and 5th grade classrooms	2005, M.A. Thesis, Arizona State University	Elementary School Teacher, Virginia
Niccole Villa Cerveny	A weathering-based perspective on rock art conservation	2005, Ph.D. Dissertation, Arizona State University	Full-time Instructor, Mesa Community College
Wendy Bigler	Historical biocomplexity in irrigation agriculture: The Akimel O'Odham (Pima) and the	2007, Ph.D. Dissertation, Arizona State University	Assistant Professor, Southern Illinois University

	Gila River, Arizona		
Douglas Frink	Explorations into a dynamic process-oriented soil science	2007, Ph.D. Dissertation, Arizona State University	Visiting Professor, Valdosta State University
Casey Allen	Using rock art as an alternative science pedagogy	2008, Ph.D. Dissertation, Arizona State University	Assistant Professor, University of Colorado-Denver
Elyssa Gutbrod	Implementing Rapid Assessment of the Trail Environments of Arid Regions: Indicator Development and Implementation Scenarios	2013, Ph.D. Dissertation, Arizona State University	GIS Professional Employment (Titan Mapping Solutions), Calgary, Canada
Emma Harrison	Introducing a terrestrial carbon pool in desert mountains	2013, M.A. Thesis, Arizona State University	Visiting Instructor, University of Wyoming
Phil Larson	Conceptual field-based models to elucidate the distribution and nature of desert fluvial terraces: Case studies within the Sonoran Desert, Basin and Range, Arizona.	2013, Ph.D. Dissertation, Arizona State University	Assistant Professor, Minnesota State at Mankato
R. Evan Palmer	Analysis of the Spatial Thinking of College Students in Traditional and Web-facilitated Introductory Geography	2014, Ph.D. Dissertation, Arizona State University	Assistant Professor, Air Force Academy, Colorado Springs

	Courses using Aerial Photography and Geo-visualization Technology		
Ara Jeong	Anthropocene in the Geomorphology of the Sonoran Desert	2019, Ph.D. Dissertation, Arizona State University	Assistant Professor, Korea Military Academy
Ryan Clement	Lenticular-shaped granitic core stones of South Mountains, central Arizona	2024, M.A. Thesis, Arizona State University	U.S. Air Force
Kenzie Shandonay	Assessing sand dune mobility through drought and vegetation analysis	2025, Ph.D. Dissertation, Arizona State University	Teaching Professor, Normandale Community College

Awards

2012 [President's Medal of Social Embeddedness for the Teaching Foundations Project](#) [led by Laura B. Turchi, shared with many others]

2010 Geography Excellence in Media Award from the National Council for Geographic Education. [Hinde, E.R., Jimenez-Silva, M., Ekiss, G.O., Dorn, R.I., Osborn Popp, S.E., Managing Editors, (2009, Version 5.4). [GeoLiteracy ELL Adaptations: Integrating Geography, Reading and Writing](#). Tempe, AZ: Arizona Geographic Alliance.]

Distinguished Mentor Award from the National Council for Geographic Education, 2009. College of Liberal Arts and Science's Innovation in Teaching Award, Arizona State University, 2009.

Enhancement of Geographic Literacy Cram Award, 2005 for GeoMath, National Council for Social Studies (with G.B. Ekiss and E. Hinde)

Professor of the Year Special Recognition, 2005, Arizona State University Parents Association

Enhancement of Geographic Literacy Cram Award, 2003 for GeoLiteracy, National Council for Social Studies (with G.B. Ekiss and E. Hinde)

Guggenheim Fellowship, 1996-1997

Wiley Award, Presented for Excellence in Geomorphological Research, British Geomorphological Research Group, 1993 (with Roger LeB. Hooke)

Castleton Award, Presented for Excellence in Rock Art Research, American Rock Art Research Association, 1992

G.K. Gilbert Award, Presented for Excellence in Geomorphological Research, Geomorphology Specialty Group of the Assoc. American Geographers, 1988

New Professor Excellence in Teaching Award, Texas Tech University, 1988

Presidential Young Investigator Award of the National Science Foundation, 1987

New Faculty Award, Texas Tech University, 1987

Kirk Bryan Award of the Geological Society of America (with T.M. Oberlander), For Excellence in Geomorphological Research, 1986

Honors

Fellow of the Arizona-Nevada Academy of Sciences, 1996

Fellow of the Geological Society of America, 1992

Sigma Xi, 1986

National Science Foundation Graduate Fellowship, 1980-1984

Phi Beta Kappa, 1979