

List of Publications

Under Review

1. Vazquez-Ortega, A., Huckle, D., Perdrial, J., Amistadi, M.K., Durcik, M., Rasmussen, C., McIntosh, J., Chorover, J. (2015) Solid-phase redistribution of rare earth elements in hillslope pedons subjected to different hydrologic fluxes. *Chemical Geology*.
2. Serrat-Capdevila, A., Merino, M., Valdes, J., Durcik, M. (2015) Evaluation of the performance of three satellite precipitation products over Africa. *Journal of Hydrometeorology*.

International Journals (with peer review)

1. Pangle L.A., S.B. DeLong, N. Abramson, J. Adams, G. Barron-Gafford, D.D. Breshears, P. Brooks, J. Chorover, W.E. Dietrich, K. Dontsova, **M. Durcik**, J. Espeleta, T.P.A. Ferre, R. Ferriere, W. Henderson, E. Hunt, T.E. Huxman, D. Millar, B. Murphy, G.-Y. Niu, M. Pavao-Zuckerman, J.D. Pelletier, C. Rasmussen, J. Ruiz, S. Saleska, M. Schaap, M. Sibayan, P.A. Troch, M. Tuller, J. van Haren, X. Zeng (2015) The Landscape Evolution Observatory: A large-scale controllable infrastructure to study coupled Earth-surface processes. *Geomorphology*, 244: 190-203, doi: 10.1016/j.geomorph.2015.01.020.
2. Niu G.-Y., C. Paniconi, P.A. Troch, R.L. Scott, **M. Durcik**, X. Zeng, T. Huxman, and D.C. Goodrich (2014) An integrated modelling framework of catchment-scale ecohydrological processes: 1. Model description and tests over an energy-limited watershed. *Ecohydrology*, 7(2): 427-439, doi: 10.1002/eco.1362.
3. Niu G.-Y., P.A. Troch, C. Paniconi, R.L. Scott, **M. Durcik**, X. Zeng, T. Huxman, D. Goodrich, J.D. Pelletier (2014) An integrated modelling framework of catchment-scale ecohydrological processes: 2. the role of water subsidy by overland flow on vegetation dynamics in a semi-arid catchment. *Ecohydrology*, 7(2): 815-827, doi: 10.1002/eco.1405.
4. Pelletier J.D., G.A. Barron-Gafford, D.D. Breshears, P.D. Brooks, J. Chorover, **M. Durcik**, C.J. Harman, T.E. Huxman, K.A. Lohse, R. Lybrand, T. Meixner, J.C. McIntosh, S.A. Papuga, C. Rasmussen, M. Schaap, T.L. Swetnam, and P.A. Troch (2013): Coevolution of nonlinear trends in vegetation, soils, and topography with elevation and slope aspect: A case study in the sky islands of southern Arizona. *Journal of Geophysical Research: Earth Surface*, 118(2): 741-758, doi: 10.1002/jgrf.20046
5. Wi S., F. Dominguez, **M. Durcik**, J. Valdes, H.F. Diaz, and C.L. Castro (2012) Climate Change Projections of Snowfall in the Colorado River Basin using Dynamical Downscaling. *Water Resources Research*, 48: W05504, doi: 10.1029/2011WR010674.
6. Chorover J., P.A. Troch, C. Rasmussen, P. Brooks, J. Pelletier, D.D. Breshears, T. Huxman, K. Lohse, J. McIntosh, T. Meixner, S. Papuga, M. Schaap, M. Litvak, J. Perdrial, A. Harpold, and **M. Durcik** (2011) How Water, Carbon, and Energy Drive Critical Zone Evolution: The Jemez-Santa Catalina Critical Zone Observatory. *Vadose Zone Journal*, 10(3): 884-899, doi: 10.2136/vzj2010.0132.
7. Guardiola-Claramonte M., P.A. Troch, D.D. Breshears, T.E. Huxman, M.B. Switanek, **M. Durcik**, and N.S. Cobb (2011) Decreased streamflow in semi-arid basins following drought-induced tree die-off: a counter-intuitive and indirect climate impact on hydrology. *Journal of Hydrology*, 406(3-4): 225-233, doi: 10.1016/j.jhydrol.2011.06.017.

8. Voepel H., B. Ruddell, R. Schumer, P.A. Troch, P.D. Brooks, A. Neal, **M. Durcik**, and M. Sivapalan (2011) Quantifying the role of climate and landscape characteristics on hydrologic partitioning and vegetation response. *Water Resources Research*, 47: W00J09, doi: 10.1029/2010WR009944.
9. Brooks P.D., P.A. Troch, **M. Durcik**, E. Gallo, and M. Schlegel (2011) Predicting regional-scale ecosystem response to changes in precipitation: Not all rain is created equal. *Water Resources Research*, 47: W00J08, doi: 10.1029/2010WR009762.
10. Guardiola-Claramonte M., P.A. Troch, A.D. Ziegler, T.W. Giambelluca, **M. Durcik**, J.B. Vogler, and M.A. Nullet (2010) Hydrologic effects of the expansion of rubber (*Hevea brasiliensis*) in a tropical catchment. *Ecohydrology*, 3(3): 306-314, doi: 10.1002/eco.110.
11. Hurkmans R., P. A. Troch, R. Uijlenhoet, P. Torfs, and **M. Durcik** (2009) Effects of climate variability on water storage in the Colorado River Basin. *Journal of Hydrometeorology*, 10(5): 1257-1270, doi: 10.1175/2009JHM1133.1.
12. Troch P.A., G.F. Martinez, V.R.N. Pauwels, **M. Durcik**, M. Sivapalan, C. Harman, P.D. Brooks, H. Gupta, and T.E. Huxman (2009) Climate and vegetation water-use efficiency at catchment scales. *Hydrological Processes*, 23: 2409-2414, doi: 10.1002/hyp.7358.
13. Troch, P., **M. Durcik**, S. Seneviratne, M. Hirschi, A. Teuling, R. Hurkmans, and S. Hasan (2007) New Data Sets to Estimate Terrestrial Water Storage Change, *EOS Transactions, American Geophysical Union*, 88(45): 469-470, doi:10.1029/2007EO450001.
14. Karimi H.A., **M. Durcik**, and W. Rasdorf (2004) Evaluation of Uncertainties Associated with Geocoding Techniques. *Computer-Aided Civil and Infrastructure Engineering*, 19: 170-185, doi:10.1111/j.1467-8667.2004.00346.x.
15. Vallova B., Z. Kovacikova, **M. Durcik**, M. Vicanova, E. Tatrai, and M. Dusinska (1999) DNA Damage in Lung Cells after Radon Exposure Detected by the Commet Assay. *Neola 5th. Neoplasma*, 46 (Supplement): 83-84.
16. **Durcik M.**, F. Havlik, M. Vicanova, and D. Nikodemova (1997) Radon Risk Assessment in Slovak Kindergartens and Basic Schools. *Radiation Protection Dosimetry*, 71(3): 201-206.
17. **Durcik M.** and F. Havlik (1996) Experimental study of radon and thoron diffusion through barriers. *Journal of Radioanalytical and Nuclear Chemistry, Articles*, 209(2): 307-313, doi:10.1007/BF02040465.

National Journals (with peer review)

1. Vičanová M., **M. Ďurčík**, D. Nikodemová (1997) Sledovanie výskytu radónu v podzemných pracovných priestoroch a odhad individuálnej záťaže pracovníkov. *Bezpečnosť a hygiena práce*, 47(4): 27-30, (in Slovak).
2. Nikodemová D., M. Vičanová, **M. Ďurčík**, F. Havlík (1996) Súčasný stav riešenia problematiky radónu v pobytových priestoroch SR. *TZB Haustechnik*, 4: 13-15, (in Slovak).
3. **Ďurčík M.**, F. Havlík, M. Vičanová, D. Nikodemová (1996) Stanovenie radónového rizika v materských a základných školách. *Bezpečná práca*, 27(4): 152-156, (in Slovak).
4. Havlík F., M. Ďurčík, D. Nikodemová, M. Vičanová (1995) Metrologija radona i jeho produktov raspada v Slovaki. *ANRI Magazine*, (1): 36-43, (in Russian).
5. Nikodemová D., M. Vičanová, F. Havlík, M. Ďurčík (1994) Opit opredeljenja urovnja sodržanija radona v žilich i obščestvennich zdanijach i oceňka riska zdarovja. *ANRI Magazine*, (2): 39-49, (in Russian).

6. Havlík F., **M. Ďurčík** (1994) Závislosť účinnosti detekcie monitoru Silena 4S od koncentrácie aerosolov. *Bezpečnosť jadrovej energie*, 2[40](5/6): 132-133, (in Slovak).
7. **Ďurčík M.**, F. Havlík, D. Nikodemová (1993) Štátne metrologické stredisko SR pre radónové veličiny: II. Systém sekundárneho etalónu ^{222}Rn . *Bezpečnosť jadrovej energie*, 1[39](4): 133-136, (in Slovak).
8. Havlík F., **M. Ďurčík**, D. Nikodemová (1993) Štátne metrologické stredisko SR pre radónové veličiny: I. Radónová komora a etalonážny systém EISPP. *Bezpečnosť jadrovej energie*, 1[39](3): 107-111, (in Slovak).

Books and Book Chapters

1. Karimi H.A., P. Sutovsky, and **M. Durcik** (2008) Accuracy and Performance Assessment of a Window-Based Heuristic Algorithm for Real-Time Routing in Map-Based Mobile Applications (chapter 12), in: *Map-Based Mobile Services – Design, Interaction and Usability* (eds. L. Meng, A. Zipf and S. Winter), Springer Verlag, pp. 248-264, doi: 10.1007/978-3-540-37110-6_12.
2. Cabanekova H., **M. Durcik**, and D. Nikodemova (Eds.) (1998) *Conference Proceedings of the 21st Radiation Hygiene Days Jasná pod Chopkom 1998*, ISBN 80-88806-04-6, Bratislava, Slovakia.

Conference Proceeding Papers

1. Liu, Y., **M. Durcik**, H.V. Gupta, and T. Wagener (2008), Developing distributed conceptual hydrological models from geospatial databases, In *Groundwater–Surface Water Interaction: Process Understanding, Conceptualization and Modelling, Proceedings of Symposium HS1002 at IUGG2007*, Perugia, July 2007, IAHS Publ. 321, pp. 94-102, <<http://iahs.info/redbooks/321.htm>>.
2. **Durcik M.** and D. Nikodemova (1998) Radiation Protection Problems by the Operation of the Cyclotron Facility. *Conference Proceedings of the 21st Radiation Hygiene Days*, ISBN 80-88806-04-6, Jasná pod Chopkom 1998, pp. 121-124.
3. **Durcik M.** and M. Vicanova (1998) Metrology of Radon and Thoron Concentrations. *Conference Proceedings of the 21st Radiation Hygiene Days*, ISBN 80-88806-04-6, Jasná pod Chopkom 1998, pp. 201-204.
4. Vicanova M., **M. Durcik**, and D. Nikodemova (1998) Radiation Load from Radon Exposure in Slovakia. *Conference Proceedings of the 21st Radiation Hygiene Days*, ISBN 80-88806-04-6, Jasná pod Chopkom 1998, pp. 209-212.
5. Kostial J., H. Cabanekova, V. Nemcovic, O. Svatosova, M. Fulop, **M. Durcik**, P. Buban, V. Galbavy, M. Dzubara, J. Svatos (1998) Intercomparison Measurements Zavazna Poruba '98. 11th Regular Workshop on Mobile Radiological Laboratories, Zavazna Poruba (Slovakia), 21-25 Sep 1998, 36 pp, INIS-SK--99-031.
6. Vicanova M., **M. Durcik**, and D. Nikodemova (1997) Radon Air Concentrations in Karst Caves and Estimates of Personal Doses at Employees. *IRPA Regional Symposium, Radiation Protection in Neighbouring Countries of Central Europe*, 8-12 September 1997, Prague, pp.195-198.
7. Beno M., M. Vladar, D. Nikodemova, Vicanova M., and **M. Durcik** (1997) Chromosomal Aberrations in Ore-Miners of Slovakia. *IRPA Regional Symposium, Radiation Protection in Neighbouring Countries of Central Europe*, 8-12 September 1997, Prague, pp.5-8.

8. **Durcik M.**, M. Vicanova, D. Nikodemova (1997) Radon and Daughters Calibration System in Slovakia. *Proceedings of the European Conference on Protection against Radon at Home and at Work*, Prague 1997, pp. 79-83.
9. Vicanova M., **M. Durcik**, and D. Nikodemova (1997) Indoor Radon Exposure of Slovak Population. *Proceedings of the European Conference on Protection against Radon in Home and at Work*, June 2-6, 1997, Prague, pp.284-288.
10. Vicanova M., D. Nikodemova, **M. Durcik**, and F. Havlik (1995) Indoor Radon Concentrations in "Hot Spots" Locations in Slovakia. *Proc. of Healthy Buildings '95*, Milano 10-14 September 1995, Vol.2, pp. 715-720.
11. **Durcik M.**, Havlik F., Nikodemova D. (1994) The influence of artificial ionization of air on decreasing of radon daughter concentrations. *Proc. of the 18th Radiation hygiene days*, Jáchymov 1994, pp. 52-54.
12. Sykora I., **M. Durcik**, J. Stanicek, and P. Povinec (1992) Radon problem in low-level gamma-ray spectrometry. In *Povinec P. (Ed.) Rare Nuclear Processes, Proc. of the 14th Europhysics conference on Nuclear Physics*, Bratislava 1990, World Scientific, pp. 321-326, ISBN 981-02-0802-2.

Conference Presentations

1. Fang Y., G-Y. Niu, P. Troch, C. Paniconi, M. Durcik, J. Chorover (2014) Accessing Topographic Effects on Solar Radiation Distribution and Ecohydrological Processes. Abstract H51D-0642 presented at 2014 Fall Meeting, AGU, San Francisco, CA, 15-19 Dec.
2. Serrat-Capdevila A., J.B. Valdes, R. Valdes, E.M. Demaria, **M. Durcik**, K. Maitaria, T. Roy (2013) A Multi-Model Real Time Forecasting Prototype System in the Mara Basin (Kenya/Tanzania). Abstract H12A-05 presented at 2013 Fall Meeting, AGU, San Francisco, California, 9-13 Dec.
3. **Durcik M.** (2011) Jemez-Catalina CZO Data Management System and its Integration. CUAHSI Conference on Hydrologic Data and Information Systems 2011, Logan, Utah, 22-24 June.
4. **Durcik M.** (2011) Jemez - Catalina CZO Data Management. CZO All-Hands Meeting, Biosphere 2, Oracle, Arizona, 8-12 May.
5. Wi S., F. Dominguez, **M. Durcik**, J.B. Valdes, H.F. Diaz (2010) Climate Change Projections using Dynamical Downscaling for the Colorado River Basin. Abstract GC43F-1023 presented at 2010 Fall Meeting, AGU, San Francisco, California, 13-17 December.
6. Demaria E.M., P.A. Troch, **M. Durcik**, F. Dominguez, S. Rajagopal (2010) Streamflow Simulations in the Salt and Verde River basins using Statistically and Dynamically Downscaled Climate Scenarios. Abstract H23G-1305 presented at 2010 Fall Meeting, AGU, San Francisco, California, 13-17 December.
7. Niu G., P.A. Troch, C. Paniconi, R.L. Scott, **M. Durcik**, X. Zeng, T.E. Huxman, D.C. Goodrich (2010) The Role of Water Subsidy on Vegetation Dynamics in a Semiarid Grassland Catchment: Comparison between Field Measurements and 3-D Ecohydrological Modeling. Abstract H43J-03 presented at 2010 Fall Meeting, AGU, San Francisco, California, 13-17 December.
8. Whitenack T., M.W. Williams, D.G. Tarboton, I. Zaslavsky, **M. Durcik**, R.G. Lucas, C. Dow, X. Meng, B. Bills, M. Leon, C. Yang, M. Arnold, A.K. Aufdenkampe, K. Schreuders, O. Alvarez (2010) Development of an integrated information system for Critical Zone Observatory data. Abstract IN31B-1289 presented at 2010 Fall Meeting, AGU, San Francisco, California, 13-17 December.
9. **Durcik M.**, P. Troch and H. Gupta (2009) Colorado River near Real-Time TWS Dynamics: Application of the SAHRA Geodatabase. The 2009 Ground Water Summit—Adapting to Increasing Demands in a Changing Climate, April 19-23, Tucson, AZ, USA.

<<http://ngwa.confex.com/ngwa/2009gws/webprogram/Session2840.html> > and
 <http://voda.hwr.arizona.edu/twsc/sahra/images/Durcik_Troch_Gupta_NGWA_2009.pdf >.

10. **Durcik M.**, P. Troch and H. Gupta (2009), Colorado River Basin Terrestrial Water Storage Dynamics and Vegetation Response. *Eos Transactions AGU*, 90(52), Fall Meeting Supplement, Abstract H21A-0824, <http://voda.hwr.arizona.edu/twsc/sahra/images/Durcik_poster_agu2009.pdf >.
11. Guardiola-Claramonte M., P.A. Troch, M.B. Switanek, and **M. Durcik** (2009) Regional vegetation die-off alters hydrological partitioning. *Eos Transactions AGU*, 90(52), Fall Meeting Supplement, Abstract H33D-0906.
12. Troch P.A., M. Guardiola-Claramonte, **M. Durcik**, and M.B. Switanek (2009) Unraveling the hydrological implications of regional vegetation die-off (Invited). *Eos Transactions AGU*, 90(52), Fall Meeting Supplement, Abstract H32B-03.
13. Brooks P., P.A. Troch, **M. Durcik**, E.L. Gallo, B.G. Moravec, M.E. Schlegel, and M. Carlson (2009) Predicting regional-scale ecosystem response to changes in precipitation: Not all rain is created equal. *Eos Transactions AGU*, 90(52), Fall Meeting Supplement, Abstract H32B-05.
14. Voepel H.E., A.L. Neal, **M. Durcik**, P.D. Brooks, P.A. Troch., and B.L. Ruddell (2009) Vegetation greenness predicted by hydrologic partitioning of precipitation across climates (Invited). *Eos Transactions AGU*, 90(52), Fall Meeting Supplement, Abstract H13D-1009.
15. Zanardo S., C.J. Harman, P.D. Brooks, **M. Durcik**, M. Sivapalan, and P.A. Troch (2009) Landscape and climate controls on the Horton index revealed through a stochastic-analytical model (Invited). *Eos Transactions AGU*, 90(52), Fall Meeting Supplement, Abstract H13D-1002.
16. Troch P.A., M. Sivapalan, B.L. Ruddell, P.D. Brooks, **M. Durcik**, and G. McGrath (2009) Inter-annual and inter-catchment variability of hydrologic partitioning: The importance of the Horton index to improve hydrologic predictions in a changing environment (Invited). *Eos Transactions AGU*, 90(52), Fall Meeting Supplement, Abstract H11I-01.
17. Hurkmans R.T.W.L., P.A. Troch, R. Uijlenhoet, P.J.J.F. Torfs, and **M. Durcik** (2009) Effects of inter-annual climate variability on water storage in the Colorado River Basin. *Geophysical Research Abstracts*, Vol. 11, EGU2009-4670, EGU General Assembly 2009.
18. **Durcik M.**, P. Troch and H. Gupta (2008) Colorado River Real-Time TWS: Application of the SAHRA Geodatabase. The 8th SAHRA Annual Meeting, October 16-17, Biosphere 2, Oracle, AZ, USA. <http://www.sahra.arizona.edu/events/meetings/2008_ann_meeting/pdfs/s2/Durcik_SAM_2008_v2.pdf>.
19. Dominguez F., S. Rajagopal, H.V. Gupta, P.A. Troch, and **M. Durcik** (2008) Assessing Impacts of Climate Change in a Semi-Arid Watershed Using Downscaled IPCC Climate Output. *Eos Transactions AGU*, 89(52), Fall Meeting Supplement, Abstract GC43C-0762.
20. Hurkmans R.T.W.L., **M. Durcik**, P.A. Troch, M. Hirschi, and S. Seneviratne (2007) Terrestrial storage changes and long-term climate variations in the Colorado basin. *Geophysical Research Abstracts*, Vol. 9, EGU2007-A-08263.
21. Liu Y., H. Gupta, **M. Durcik**, and T. Wagener (2007) A Novel Approach to Parameter Identification for Distributed Hydrologic Modeling. *Eos Transactions AGU*, 88(52), Fall Meeting Supplement, Abstract H21C-0689.
22. Rajagopal S., H. Gupta, P.A. Troch, M. Switanek, **M. Durcik**, and F. Dominguez (2007) Development and Evaluation of a Streamflow Forecasting Tool to Improve Seasonal Water Supply Forecasts on the Salt and Verde River Basin, Arizona. *Eos Transactions AGU*, 88(52), Fall Meeting Supplement, Abstract H23F-1676.
23. Farid A., D. Goodrich, **M. Durcik**, and S. Soroshian (2007) Using Lidar to distinguish leaf area index in cottonwood trees and improve riparian water use estimates in the Upper San Pedro River Basin. *Eos Transactions AGU*, 88(52), Fall Meeting Supplement, Abstract G51C-0614.

24. Hurkmans R.T., **M. Durcik**, S. Hasan, and P.A. Troch (2007) Effects of Climate Variability on Water Storage in the Colorado River Basin. *Eos Transactions AGU*, 88(52), Fall Meeting Supplement, Abstract H43A-0968.
25. Demaria E.M., J.B. Valdes, F. Dominguez, and **M. Durcik** (2007) Analysis of TRMM and gauge rainfall in the La Plata River Basin in South America for hydrologic predictions. *Eos Transactions AGU*, 88(52), Fall Meeting Supplement, Abstract H33A-0976.
26. Liu, Y., H.V. Gupta, **M. Durcik**, and T. Wagener (2007), Towards a common conceptual framework for integrated modeling of surface-water/ground water systems in arid and semi-arid regions. Abstract HS1002 at IUGG XXVI General Assembly, July 2-13, 2007, Perugia, Italy.
27. Troch P.A., S. Seneviratne, M. Hirschi, R. Hurkmans, S. Hassan, and **M. Durcik** (2006) Estimating Terrestrial Water Storage Changes in the Colorado River Basin: Atmospheric Data Analysis, Satellite Remote Sensing and Hydrologic Modeling. *Eos Transactions AGU*, 87(52), Fall Meeting Supplement, Abstract H33C-1525.
28. Gupta H., Y. Liu, T. Wagener, **M. Durcik**, C. Duffy, and E. Springer (2005) Integrated Water Resources Planning and Management in Arid/Semi-arid Regions: Data, Modeling, and Assessment. *Eos Transactions AGU*, 86(52), Fall Meeting Supplement, Abstract H54C-02.
29. Vicanova M. and **M. Durcik** (2000) The Determination of Radon and Thoron Concentrations in the Air by the Application of SSTD CR-39. 20th International Conference on Nuclear Tracks in Solids, Book of Abstracts, August 28 – September 1, 2000, Portoroz, Slovenia.