Chu-Lin Cheng, Ph.D.

School of Earth, Environmental, and Marine Sciences; Department Civil Engineering
The University of Texas – Rio Grande Valley
Phone: 956-665-2464 (O); E-mail: chulin.cheng@utrgv.edu
Website: http://faculty.utrgv.edu/chulin.cheng

a. Professional Qualifications

National Cheng Kung University	Earth Science	B.S.	1996
National Cheng Kung University	Hydrogeology	M.S.	1998
Iowa State University	Water Resources and Geology	M.S.	2006
Iowa State University	Environmental Science/Engineering	Ph.D.	2009
University of Tennessee	Water/Energy Resources	Postdoc	2010-14
Oak Ridge National Laboratory	Water/Energy/Climate Change	Joint Postdoc	2012-14

b. Appointments

Associate Professor, Envr. & Earth Sciences; Civil Engineering, UTRGV	2020-present
Assistant Professor, Envr. & Earth Sciences; Civil Engineering, UTRGV	2015-2020
Assistant Professor, Geology and Civil Engineering, UT-Pan American	2014-2015
Research Assistant, Dept. Civil, Const. & Envr. Engineering, Iowa State University	2006-2009
Teaching/Research Assistant, Dept. Geol. & Atmo. Sciences, Iowa State University	2003-2006
Hydrogeological Engineer, Taiwan Tainan Hydraulic Laboratory	1999-2002

c. Selected Products

(i) Five Relevant Publications

[1] Perfect, E., *C.-L. Cheng*, M. Kang, H. Z. Bilheux, J.M. Lamanna, M. Gragg, and D.M. Wright, **2014**, Neutron Imaging of Hydrogen-Rich Fluids in Geomaterials and Engineered Porous Media: A review, *Earth-Sciences Review*. doi:10.1016/j.earscirev.2013.11.012.

[2] Cheng, C.-L., E. Perfect, B. Donnelly, H.Z. Bilheux, A.S. Tremsin, L.D. McKay, J.Cai, V.H. Distefano, and L.J. Santodonato. **2015**. Rapid imbibition of water in fractures within unsaturated sedimentary rock, *Advances in Water Resources*. doi:10.1016/j.advwatres.2015.01.010.

[3] *Cheng, C.-L.*, M. Kang, E. Perfect, S. Voisin, J. Horita, H.Z. Bilheux, J.M. Warren, D.L. Jacobson, and D.S. Hussey, **2012**, Average Soil Water Retention Curves Measured by Neutron Radiography, *Soil Science Society of America Journal* 76 (4): 1184-1191. doi:10.2136/sssaj2011.0313.

[4] *Cheng, C.-L.*, J.A. Gaunt, F. Mao, and S.K. Ong, **2012**, Permeation of Gasoline through Ductile Iron Pipe Gaskets in Water Mains, *Journal of American Water Works Association*, 104 (4): E271-E281.

[5] Mao, F., J.A. Gaunt, S.K. Ong, and *C.-L. Cheng*, **2011**, Permeation of Petroleum-Based Hydrocarbons through PVC Pipes Jointed with Rieber Gasket Systems *ASCE Journal of Environmental Engineering*, doi:10.1061/(ASCE)EE.1943-7870.0000431

(ii) Five Other Publications

[6] Cropper, C., E. Perfect, *C.-L. Cheng*, L.D. McKay, and M. Kang 2016. "Evaluation of TrueCell for Estimating Point Capillary Pressure – Saturation Parameters for Flint Sand", *GEODERMA*: DOI:10.1016/j.geoderma.2016.09.034.

[7] Cai, J.C., E. Perfect, *C.-L. Cheng*, and X.Y. Hu, **2014**, Generalized Modeling of Spontaneous Imbibition Based on Hagen-Poiseuille Flow in Tortuous Capillaries with Variably Shaped Apertures, *Langmuir*, 30(18): 5142-5151.

[8] Kang, M., E. Perfect, *C.-L. Cheng*, H. Z. Billheux, J. Lee, J. Horita, and J.M. Warren. **2014**, Multiple pixel-scale soil water retention curves quantified by neutron radiography, *Advances in Water Resources*. doi:10.1016/j.advwatres.2013.12.004.

[9] *Cheng, C.-L.*, E. Perfect, and R.T. Mills. 2013, Forward Prediction of Height-Averaged Capillary Pressure-Saturation Parameters using the BC-vG Upscaler, *Vadose Zone Journal*. doi:10.2136/vzj2012.0174.

[10] Donnelly, B., E. Perfect, L.D. McKay, P.J. Lemiszki, V.H. DiStefano, L.M. Anovitz, J. McFarlane, R.E. Hale, and *C.-L. Cheng*. **2016**. Capillary Pressure – Saturation Relationships for Gas Shales Measured Using A Water Activity Meter. *Journal of Natural Gas Science and Engineering*, Special Issue: Advanced Theoretical and Numerical Approaches and Applications to Enhanced Gas Recovery. doi: 10.1016/j.jngse.2016.05.014.

d. Synergistic Activities (selected)

- The 2nd Annual Faculty Research Development Institute (FRDI), Indiana University-Minority Serving Institute STEM Initiative (supported by the Department of Navy), July 24-28, 2017.
- Early Career Travel Support (NSF-National Association of Geoscience Teachers), "Early Career Geoscience Faculty: Teaching, Research, and Managing Your Career", College of William and Mary, July 26-30, 2015. (trip to NSF on July 31)
- Early Career Travel Award (SIAM-NSF), "SIAM Conference on Mathematical and Computational Issues in the Geosciences", Stanford University, June 29-July 2, 2015.
- *Invited Speaker*, Special Industrial Track Section: Advances in Groundwater Modeling. Annual Meeting of Geological Society of America (GSA), Baltimore, MD, November 1-4 (2015).
- *Steering Committee and Presenter*, Annual Texas Hydro Geo Workshop, Edward Aquifer Authority, San Antonio, TX (2015, 2016, 2017).
- *Invited Speaker*, Conference on Mathematical & Computational Issues in the Geosciences, Society for Industrial and Applied Mathematics (SIAM). Minisymposium: "Mathematical Models and Numerical Methods for Flow and Transport in Porous Media". Stanford University, Stanford, California. (2015)
- *Journal Reviewer*, ASCE Journal of Hazardous, Toxic, and Radioactive Waste; Soil Science Society of America Journal; Journal of Hydrogeology and Hydrologic Engineering; Environmental and Engineering Geoscience; Advances in Water Resources; Geoderma; Agronomy; Journal of Environmental Modeling and Software.
- Engage and link students with communities, K12 students and teachers, and potentials employers through NSF funded "GP-EXTRA: Stimulating Hispanic Participation in the Geosciences (SHIP-GEO)" project.
- Assist and engage students with small- and medium-sized businesses for energy, water, and waste management through DOE-EERE funded "South Texas Industrial Assessment Center at UTRGV" project.