

Chengmin Hsu
325 Broadway
R/PSD2
Boulder, CO 80305
(303)497-5673
chengmin.hsu@noaa.gov

Education

Aug 2010 PhD, Civil Engineering (Remote Sensing & Statistics Emphases), University of Colorado Denver
May 2006 Master of Engineering (Geographic Information Systems), University of Colorado Denver
May 2001 Master of Architecture, University of Colorado Denver

Licensure

Registered Architect Taiwan; & Colorado, USA

Appointments

Sep. 2010 – Present Research Associate, Cooperative Institute for Research in Environmental Sciences (CIRES), University of Colorado, Boulder, CO
Jun. 2006 – Sep. 2010 Graduate Research Assistant, Department of Civil Engineering, University of Colorado, Denver, CO
Dec. 2004 – Jan. 2006 Project Architect, Overway & Pedersen Architects, Denver, CO

Skills and Trainings

Major Disciplines

Hydrologic Modeling, Remote Sensing, Spatial-Temporal Variability Modeling, Nonparametric Functional Approximation, Relational Database Management, GIS modeling

Software Skills

1. *Remote Sensing*: ERDAS, ENVI, eCognition
2. *Statistics and Numerical Analysis*: R and IDL
3. *GIS*: ArcGIS, GRASS
4. *Database Management*: MS Access, Oracle SQL Plus, PostgreSQL
5. *Programming Language*: C++, C#, and Python
6. *Design and Construction*: AutoCAD

Publications

Hsu, C., L.E. Johnson, R.J. Zamora, T. Schneider, and R. Cifelli, 2015: Downscaling advanced microwave scanning radiometer (AMSR-E) soil moisture retrievals using a multiple time-scale exponential rainfall adjustment technique. *J. Geophysics and Remote Sensing* 4: 139. doi: 10.4172/2169-0049.1000139

Hsu, C., 2014: Development of a framework for predicting incident probabilities of All Terrain Vehicle use across a semi-arid landscape. *Applied Spatial Analysis and Policy*. doi:10.1007/s12061-014-9129-8

Hsu, C., 2010: [High-resolution soil moisture retrieval in the Platte river watersheds](#). *Colorado Water*, 27(3), 26-29.

Hsu, C, and L.E. Johnson, 2008: *Multi-criteria wetlands mapping using an integrated pixel-based and object-based classification approach*. Colorado Department of Transportation, DTD Applied

Research and Innovation Branch, Report No. CDOT-2008-8.

Presentations

- Cifelli, R., C. Hsu, and L. Johnson, 2014-12-19: Assessment of Hydrologic Response to variable precipitation forcing: Russian River case study. *American Geophysical Union*, San Francisco, CA, USA (Oral)
- Hsu, C., L. Johnson, R. Zamora, and R. Cifelli, 2014-02-04: Distributed hydrologic modeling for water management decision support in the Russian River basin, California. 94th American Meteorological Society Annual Meeting, Atlanta, GA, USA. (Oral Presentation)
- Hsu, C., L. Johnson, R. Zamora, and R. Cifelli, 2014-02-06: Improving baseflow simulations in a distributed hydrologic model for drought seasons using MODIS-based evapotranspiration products and Budyko's dryness index. 94th American Meteorological Society Annual Meeting, Atlanta, GA, USA. (Oral Presentation)
- Hsu, C., L. Johnson, R. Cifelli, and R. Zamora, 2012-10-17: Distributed hydrologic modeling using high resolution precipitation products. 7th Biennial Bay-Delta Science Conference, Sacramento, CA (Poster)
- Hsu C., Zamora, R., Cifelli, R., Schneider, T., Johnson, L., 2011-12-5: Toward the estimation of high-resolution daily precipitation in complex regions – the study of intertwined physiographic, vegetative, and climatologic factors for PRISM enhancement. *American Geophysical Union*, San Francisco, CA, USA (Poster)