

## **Advancing the Use of Remote Sensing to Understand our Changing Earth**

### **WorldView-3 SWIR Landuse-Landcover Mineral Classification: Cuprite, Nevada**

Kathleen E. Johnson, *DigitalGlobe, Inc*  
K. Koperski

### **Google Earth Engine for Eigenspace Spectral and Temporal Transforms of Landsat 8 and Sentinel-2 Data Sets**

Lance D. Yarbrough, *The University of Mississippi*  
Greg Easson and Eleanor Dietz

### **Validation of the Operational SNPP VIIRS GVF Product using High Resolution Google Earth images**

Zhangyan Jiang, *IMSG at NOAA/NESDIS/STAR*

### **Development of a Semi-automated Process to Map Agriculture in the Upper Rio Grande Basin During the 2015 Growing Season using Spectral Grouping**

Victoria G. Stengel, *USGS Texas Water Science Center*  
Diana E. Pedraza

### **Evaluation of SMAP at Forested Sites Across a Rainfall Gradient in Northern Minnesota**

Greg Liknes, *Bemidji State University*  
William Sea

### **Requirements, Capabilities and Analysis for Earth Observations (RCA-EO)**

Greg Stensaas, *U.S. Geological Survey*

### **Snow Cover Seasonality, Trends, and Change Analysis for Kyrgyzstan using MODIS: 2000-2016**

Monika A. Tomaszewska, *Geospatial Sciences Center of Excellence, South Dakota State University*  
Kamilya Kelgenbaeva and Geoffrey M. Henebry

## **AmericaView**

### **Update on the Iowa Best Management Practice Inventory, Applications and Associated Datasets**

Robin McNeely, *IowaView - Iowa State University*

### **Modeling the Effects of Environmental Change on Crucial Wildlife Habitat**

Kenneth G. Boykin, *New MexicoView/New Mexico State University*  
Eric Ariel L. Salas, Virginia A. Seamster, Nicole M. Harings, and Keith W. Dixon

### **Using Remote Sensing Data to Improve Geographic Assessments of UV-B Radiation and its Climatology from a Sparse Ground Monitoring Network**

Michael Coughenour, *UV-B Monitoring and Research Program, Colorado State University*

### **Aligning Earth Observation Technologies with Next Generation Science Standards**

Chandi Witharana, *Department of Natural Resources and the Environment, ConnecticutView, University of Connecticut*  
James Hurd

### **South Dakota LiDAR Factsheet**

Mary O'Neill, *South Dakota State University/AmericaView*

### **RealEarth: Visualize Your Data**

Sam Batzli, *WisconsinView*

### **New Methods for Integrating Remote Sensing Imagery and Modeled Inundation Libraries for Rapid Flood Mapping**

Kevin Dobbs, *AmericaView/KansasView*

### **Mapathon—A Volunteer Geographic Information Mapping for Humanitarian Relief**

Pia van Benthem, *University of California Davis*

## **Applications of Remote Sensing for Improving Decision-making**

### **High Density LiDAR Acquisition for Forest Resource Assessment, Applications and Initial Results from a Study in Northern Minnesota**

Scott Hillard, *Minnesota DNR, Resource Assessment Program*  
Dennis Kepler

### **Unsupervised Classification of Earth Surface for Landslide Detection**

Caitlin Tran, *California State Polytechnic University, Pomona*  
Jessica Fayne, Omar Mora, and Joy Sellman

### **All Quiet on the Northern Front: Remote Sensing Based Retrospection of Human Wellbeing in the Armed-Conflicted Areas of Sri Lanka**

Chandi Witharana, *University of Connecticut*

### **Utilizing Sentinel-2 Satellite Imagery for Precision Agriculture over Potato Fields In Lebanon**

Hanan Abou Ali, *Department of Geosciences, Idaho State University*  
Donna M. Delparte and L. Michael Griffel

### **Applied Remote Sensing as a Means to Assess Brush Control in Western Rangelands**

Chandra Holifield Collins, *USDA-ARS Southwest Watershed Research Center*  
Susan Skirvin, Mark Kautz, and Loretta Metz

### **Global SSEBop Evapotranspiration for Drought Monitoring Purposes**

Stefanie Kagone, *SGT Inc.*

### **Expedited Start of Growing Season Estimates Assist Rapid Prediction of Invasive Cheatgrass in the Great Basin**

Bruce B. Worstell, *Stinger Ghaffarian Technologies (SGT, Inc.), Contractor to the U.S. Geological Survey (USGS) Earth Resources Observation and Science (EROS)*  
Stephen Boyte, Danny Howard, Jesslyn Brown, Bruce Wylie, and Devendra Dahal

### **Applying Object-based Image Analysis to the Search for World War II Era Unexploded Bombs Using High-Resolution Multi-temporal and Multi-source Data**

Cynthia A. Miller, *Minnesota State University, Mankato*  
Bryan P. Byholm, Anna K. Brand, and Fei Yuan

### **Selection of Ratings & Weightages for Preparation of Landslide Susceptibility Zonation (LSZ)**

Sharad Kumar Gupta, *Indian Institute of Technology, Mandi*  
Dericks Praise Shukla

### **Genetic Algorithm Based Stereo Image Correspondence Using Multi-objective Fitness Function For Remotely Sensed Images**

Manimala Mahato, *Indian Institute of Technology*  
Shirish S. Gedam, Jyoti Joglekar, and B. Krishna Mohan

### **Assessing Sustainable Urban Rooftop Designs through the usage of Small Unmanned Aerial Systems and Satellite Imagery: A case study in Auburn, Alabama**

Chandana Mitra, *Auburn University*  
Austin Bush and Seth Greer

### **Assimilation of Earth Observations into Land Surface Dynamic Models General Circulation Models and other Earth System Models**

### **Development of Global Gridded Vegetation Products From S-NPP VIIRS for NCEP Environmental Modeling Systems**

Jingfeng Huang, *NOAA NESDIS STAR / IMSG*  
Mingshi Chen, Zhangyan Jiang, Min Li, Tomoaki Miura, Marco Vargas, and Ivan Csiszar

### **Challenges and Innovations in Big Data Analysis for Solving Complex Largescale Problems**

### **Tutorials and Services for Working with Multiple Land Remote Sensing Data Products**

Cole Krehbiel, *Innovate!, Inc., Contractor to the U.S. Geological Survey (USGS)*  
Aaron Friesz, Tom Maiersperger, Lindsey Harriman, William (Cory) Alden, and Chris Doescher

### **Using Google Earth Engine to Map Water Use and Availability**

Mac Friedrichs, *SGT, Inc., Contractor to the U.S. Geological Survey (USGS)*

### **Big Data, Small Farms: Lessons Learned from Integrating Data Science Approaches with Remote Sensing of Smallholder and Urban Agriculture**

Jessica L. McCarty, *Miami University*  
Christopher S.R. Neigh, Mark L. Carroll, Margaret R. Wooten, Molly E. Brown, Glenn M. Sullivan, Rahel Diro, Daniel E. Osgood, Markus Enekel, and Bristol F. Powell

## **Landsat and Sentinel-2: Comparisons Cross-calibrations and Synergies**

### **Monitoring Chlorophyll-a of the Western Basin of Lake Erie with Sentinel-2A and Landsat 8 imagery**

Anita Simic Milas, *Bowling Green State University*

### **Assessing Three Satellite-derived Burned Area Products and Combining with Medium Resolution Data for Characterizing Peatland Fires**

Yenni Vetrita, *South Dakota State University, Indonesian National Institute of Aeronautics and Space (LAPAN)*

Mark A. Cochrane, Suwarsono Suwarsono, Any Zubaidah, and Erianto I. Putra

## **New initiatives for Monitoring and Projecting Land and Water Cover Use And Change**

### **Identifying Forest Conversion Hotspots in the Commonwealth of Virginia Through the Use of Landsat and Known Change Indicators**

Matthew N. House, *Virginia Tech*

Randolph H. Wynne

### **Assessing Land Cover Change During Drought Period in a Coastal Area of Binh Thuan province, Vietnam Using High Resolution Imagery**

James B. Campbell, *Virginia Tech*

Hoa Tran and Randolph H. Wynne

### **Developing Unbiased Global Et Dataset using an Automated Bias Correction Approach**

Naga Manohar Velpuri, *ASRC InuTeq, Contractor to USGS EROS*

Gabriel Senay, Stefanie Kagone, and MacKenzie Friedrichs

### **Gross Primary Productivity and Seasonal Distribution of Alpine Wetlands from 2001 to 2016 in the Gunnison River Basin, CO**

Sami Chen, *Stanford University*

Kate Maher

### **Land Surface Phenologies and Seasonalities of Croplands and Grasslands in the Prairie Pothole Region Using Passive Microwave Data 2003-2015**

Woubet G. Alemu, *South Dakota State University*

Geoffrey M. Henebry

### **The Land Product Characterization System: A Tool for Comparative Analysis of Satellite Data and Products**

Kevin Gallo, *NOAA*

### **Methods for Converting Continuous Shrubland Ecosystem Component Values to Thematic National Land Cover Database Classes**

Leila Gass, *U.S. Geological Survey*

Matthew Rigge, Collin Homer, and George Xian

### **Estimating Percent Tree Canopy Cover Using Landsat Time-Series**

Jill M. Derwin, *Department of Forest Resources and Environmental Conservation, Virginia Tech*

Valerie Thomas, Randolph Wynne, Evan B. Brooks, Christine E. Blinn, Greg Liknes, John Coulston, Mark Finco, Kevin Megown, Gretchen Moisen, Chris Toney, Robert Benton, K. Schelleweis, and Bonnie Ruefenacht

### **Changes In Land Use and Consumptive Water Use in Central California**

Martha Anderson, *USDA-ARS*

Kyle Knipper, Wayne Dulaney, Joe Alfieri, Bill Kustas, Yun Yang, Dennis Baldocchi, Feng Gao, and Chris Hain

### **Mapping Evapotranspiration for Historical (1984-2015) Water Use and Availability in the Upper Rio Grande River Basin using the Landsat Archive**

Matt Schauer, *Innovate!, Inc - Earth Resources and Observation Science (EROS) Center (U.S. Geological Survey)*

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### **2016 Tree Canopy Cover for the National Land Cover Database: Production Data, Methods, Uses, and a Tour through American Landscapes**

Stacie Bender, *USFS Geospatial Technology and Applications Center*

Wendy Goetz, Mark Finco, Bonnie Ruefenacht, Greg Liknes, and Kevin Megown