

Curriculum Vitae
Lloyd L. Coulter, MA, CMS-RS
Department of Geography
San Diego State University
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Area of Specialization:

Geographic information systems (GIS), unmanned aerial systems (UAS), airborne and satellite remote sensing, global navigation satellite systems (GNSS)

Education:

Master of Arts (May 1999), San Diego State University, Dept. of Geography, San Diego, CA
Bachelor of Arts (May 1996), San Diego State University, Dept. of Geography, San Diego, CA

Certifications:

ASPRS Certified Mapping Scientist - Remote Sensing (# RS-187), Dec. 2010
Federal Aviation Administration (FAA) Certified Remote Pilot of UAS (# 4004744), May 2017
GIS Certificate, San Diego State University, San Diego, CA., May 1996

Title of Master's Thesis:

Estimating sub-pixel lake cover on the North Slope of Alaska using linear mixture modeling and AVHRR imagery

Academic Positions:

Analyst/Programmer, Department of Geography, San Diego State University (2016-present)
Research Specialist, Department of Geography, San Diego State University (1998-2016)

Books

Time Sensitive Remote Sensing, eds. C. Lippitt, D. Stow, and L. Coulter, Springer Publishers, New York, NY.

Book Chapters

Coulter, L., D. Stow, C. Lippitt, and G. Fraley, 2015. Repeat Station Imaging for Rapid Airborne Change Detection, book chapter in: *Time Sensitive Remote Sensing*, eds. C. Lippitt, D. Stow, and L. Coulter, Springer-Verlag, New York, NY, pp. 29-43.
Stow, D., L. Coulter, and C. Benkelman. 2009. Airborne Digital Multispectral Imaging, In: *The SAGE Handbook of Remote Sensing*, D. Nellis and T. Warner (eds), SAGE Publishers, Chapter 11: 151-165.
Stow, D., C.D. Lippitt, L. Coulter and B. Davis, 2015. Time Sensitive Remote Sensing Systems for Post-Hazard Damage Assessment, book chapter in *Time Sensitive Remote Sensing*, eds. C. Lippitt, D. Stow, and L. Coulter, Springer-Verlag, New York, NY, pp. 29-43.

Refereed Journal Publications

Cao, L., D. Stow, J. Kaiser, and L. Coulter, 2007. Monitoring Cross-border Trails Using Airborne Digital Multispectral Imagery and Interactive Image Analysis Techniques, *Geocarto International*, 22:107-125.
Coulter, L., D. Stow, B. Kiracofe, C. Langevin, D.Chen, S. Daeschner, D. Service, and J. Kaiser, 1999. Deriving Current Land Use Information for Metropolitan Transportation Planning Through Integration of Remotely Sensed Data and Data Layers in Geographic Information Systems, *Photogrammetric Engineering and Remote Sensing*, 65: 1293-1300.
Coulter, L., D. Stow, J. O'Leary, A. Hope, P. Longmire and S. Peterson, 2000. Comparison of High Spatial Resolution Imagery for Efficient Generation of GIS Vegetation Layers, *Photogrammetric Engineering & Remote Sensing*, 66: 1329-1335.
Coulter, L., D. Stow, and S. Baer, 2003. A Frame Center Matching Approach to Registration of High Resolution Airborne Frame Imagery. *IEEE Transactions on Geoscience and Remote Sensing*, 41(11): 2436-2444.
Coulter, L. and D. Stow, 2008. Assessment of the spatial co-registration of multitemporal imagery from large format digital cameras in the context of detailed change detection. *Sensors*, 8: 2161-2173.
Coulter, L. and D. Stow, 2009. Monitoring habitat preserves in southern California using high spatial resolution multispectral imagery. *Environmental Monitoring and Assessment*, 152: 343-356.

- Coulter, L., A. Hope and D. Stow, 2011. Time-Space Radiometric Normalization of TM/ETM Scenes for Land-Cover Change Detection, *International Journal of Remote Sensing*, 32: 7539-7556.
- Coulter, L. L., Stow, D. A., Tsai, Y.- H., Ibanez, N., Shih, H.- C., Benza, M., Kerr, A., Weeks, J. R., & Mensah, F., 2016. Classification and Assessment of Land Cover and Land Use Change in Southern Ghana using Dense Stacks of Landsat 7 ETM+ Imagery, *Remote Sensing of Environment*, 184: 396-409.
- Coulter, L., M. Plummer, N. Zamora, D. Stow and R. McCreight, 2019. Assessment of Automated Multitemporal Image Registration using Repeat Station Imaging Techniques, *GIScience & Remote Sensing*, doi: 10.1080/15481603.2019.1629378
- Hamada, Y., D. Stow, L. Coulter, J. Jafolla, and L. Hendricks, 2007. Mapping Tamarisk Species (*Tamarix* spp.) in Riparian Habitats of Southern California Using High Spatial Resolution Hyperspectral Imagery, *Remote Sensing of Environment*, 109: 237-248.
- Hope, A., L. Coulter, and D. Stow, 1999. Estimating Lake Area in an Arctic Landscape Using Linear Mixture Modelling with AVHRR Data, *International Journal of Remote Sensing*, 20: 829-835.
- Kaiser, J. D. Stow, L. Cao, and L. Coulter, 2004. Evaluation of Remote Sensing Technologies for Mapping Trans-border Trails, *Photogrammetric Engineering & Remote Sensing*, , 70: 1441-1447.
- Lippitt, C., L. Coulter, J. Lamantia-Bishop, M. Freeman, W. Pang, and D. Stow, 2012. The Effect of Input Data Transformations on Object-based Image Analysis, *Remote Sensing Letters*, 3(1): 21-29.
- Lippitt, C.L., D. Stow, D. Roberts and L. Coulter, 2018. Multitemporal MESMA for Monitoring Herbaceous and Other Vegetation Growth Forms in Southern California Shrublands, *International Journal of Remote Sensing*, 9 (3):655–683.
- Schweizer, E., D. Stow, and L. Coulter, 2018. Automating Near Real-Time, Post-Hazard Detection of Crack Damage to Critical Infrastructure, *Photogrammetric Engineering & Remote Sensing*, 84: 75-86.
- Shih, H.C., D. Stow, J. Weeks and L. Coulter, 2016. Determining the Type and Starting Time of Land Cover and Land Use Change in Ghana Based on Discrete Analysis of Dense Landsat Image Time Series, *IEEE Journal of Selected Topics in Applied Earth Observations and Remote Sensing*, 9: 2064-2073.
- Stoler, J., D. Daniels, J. Weeks, D. Stow, L. Coulter and B. Finch, 2013, Assessing the Utility of Satellite Imagery with Differing Spatial Resolutions for Deriving Proxy Measures of Slum Presence in Accra, Ghana, *GIScience & Remote Sensing*, 49: 31-52.
- Storey, E., D. Stow, C. Chen, L. Coulter and S. Kumar, 2017, Automated Detection and Restoration of Shadows in Aerial Images to Support Visual and Automated Change Detection in Urban Environments, *GIScience & Remote Sensing*, 54: <http://dx.doi.org/10.1080/15481603.2017.1279729>
- Stow, D., L. Coulter, and Sebastian Baer, 2003. Frame Center Matching Approach to Registration for Change Detection, *International Journal of Remote Sensing*, 24: 3873-3879.
- Stow, D., A. Hope, L. Coulter, J. Kaiser, D. Service, S. Redlin, K. Schutte and A. Walters, 2003. Image-based Mapping of Irrigated Vegetation in Urban Environment, *Photogrammetric Engineering & Remote Sensing*, 69: 381-290.
- Stow, D., L. Coulter, A. Johnson, and A. Petersen, 2004. Monitoring Detailed Land-Cover Changes in Shrubland Habitat Reserves Using Multi-temporal IKONOS Data, *Geocarto International*, 19: 95-102.
- Stow, D., A. Petersen, A. Hope, R., Engstrom, and L. Coulter, 2007. Greenness Trends of Arctic Tundra Vegetation in the 1990s: Comparison of Two Normalized Difference Vegetation Index Data Sets from NOAA Advanced Very High Resolution Radiometer Systems, *International Journal of Remote Sensing*, 28: 4007-4822.
- Stow, D., Y. Hamada, L. Coulter, and Z. Anguelova, 2008. Monitoring shrubland habitat changes through object-based change identification with airborne multi-spectral imagery, *Remote Sensing of Environment*. 112: 1051-1061.
- Stow, D., J. Weeks, S. Toure, C. Lippitt, L. Coulter and E. Ashcroft, 2013. Urban Vegetation Cover and Change in Accra, Ghana: Connection to Quality of Life, *Professional Geographer*, 65: 451-465.
- Stow, D., H. Shih and L. Coulter, 2014. Discrete Classification Approach to Land Cover and Land Use Change Identification Based on Landsat Image Time Series: Initial Results for a Ghanaian Study Area, *Remote Sensing Letters*, 5: 922-931.
- Stow, D., Y. Tsai, L. Coulter, and C. Lippitt, 2014. Detecting and measuring moving objects with airborne repeat station imaging in rapid succession mode, *Remote Sensing Letters*, 5(3): 213-220.
- Stow, D., P. Riggan, E. Storey and L. Coulter, 2014. Measuring Fire Spread Rates from Repeat Pass Airborne Thermal Infrared Imagery, *Remote Sensing Letters*, 5: 803-812.
- Stow, D., H. Shih and L. Coulter, 2014. Discrete Classification Approach to Land Cover and Land Use Change Identification Based on Landsat Image Time Series: Initial Results for a Ghanaian Study Area, *Remote Sensing Letters*, 5: 922-931.
- Stow, D., C.D. Lippitt, L. Coulter and B. Davis, 2015. Time Sensitive Remote Sensing Systems for Post-Hazard Damage Assessment, book chapter in *Time Sensitive Remote Sensing*, Springer-Verlag, pp. 13-28.

- Stow, D., J. Weeks, H. Shih, L. Coulter, H. Johnson, Y-H Tsai, A. Kerr and M. Benza and F. Mensah, 2016. Inter-regional Pattern of Urbanization in Southern Ghana in the First Decade of the New Millennium, *Applied Geography*, 71: 32-43.
- Stow, D.A., L.L. Coulter, G.R. MacDonald, and C.D. Lippitt, 2016. Evaluation of Geometric Capture and Processing Elements in the Context of a Repeat Station Imaging Approach to Registration and Change Detection, *Photogrammetric Engineering and Remote Sensing*, 82 (10): 775-789.
- Stow, D.A., C.D. Lippitt, L.L. Coulter and A.D. Loerch, 2018. Towards an End-to-end Airborne Remote Sensing System for Post-Hazard Assessment of Damage to Hyper-Critical Infrastructure: Research Progress and Needs, *International Journal of Remote Sensing*, 39 (5): 1441-1458.
- Tarnavsky, E., D. Stow, L. Coulter, and A. Hope, 2004. Spatial and Radiometric Fidelity of Airborne Multispectral Imagery in the Context of Land-cover Change Analyses, *GIScience and Remote Sensing*, 41: 62-80.
- Toure, S. D. Stow, L. Coulter, A. Sanborn, D. López-Carr, 2015. Land Cover/Land Use Change Analysis using Multi-spatial Resolution Data and Object-based Image Analysis. Plurimondi. An International Forum for Research and Debate on Human Settlements Special Issue: *Proceedings of The XIX European Colloquium in Theoretical and Quantitative Geography* (ECTQG2015), 7: 1-5.
- Toure, S., D. Stow, H-C Shih, L. Coulter, J. Weeks, R. Engstrom and A. Sandborn , 2016. An Object-based, Temporal Inversion Approach to Urban Land Cover and Land Use Change Analysis, *Remote Sensing Letters*, 7: 503-512.
- Weeks, J., A. Getis, D. Stow, A.G. Hill, D. Rain, R. Engstrom, J. Stoler, C. Lippitt, M. Jankowska, A. C. Lopez-Carr, L. Coulter and C. Ofiesh, 2013. Connecting the Dots Between Health, Poverty and Place in Accra, Ghana. *Annals of the Association of American Geographers*, 102: 932-941.

Papers Published in Symposium Proceedings

- Cao, L., D. Stow, J. Kaiser, L. Coulter, and D. Johnson, 2002. Mapping Illegal Immigrant and Smuggler Trails along U.S-Mexico Border Using ADAR 5500 Imagery, *Proceedings of the ESRI User's Conference*, San Diego, CA, July, 2002.
- Coulter, L., D. Stow, A. Hope, D. Service, T. Schutte, J. Kaiser, and A. Walters, 2001. Mapping Urban Irrigated Vegetation for Water Demand Assessment, *Proceedings of the Annual Meeting of the American Society of Photogrammetry*, St. Louis, MO, April 2001.
- Coulter, L. and D. Stow, 2005. Detailed change detection using high spatial resolution frame center matched aerial photography. In *Proceedings of the 20th Biennial Workshop on Aerial Photography, Videography, and High Resolution Digital Imagery for Resource Assessment*, October 4-6, 2005, Weslaco, Texas.
- Coulter, L. and D. Stow, 2007. Classifying Vegetation Fire Fuels Using Multispectral Imagery and Lidar-derived Vegetation Height and Density, *21st Biennial Workshop on Aerial Photography, Videography, and High Resolution Digital Imagery for Resource Assessment*, Terra Haute, Indiana, May 2007.
- Coulter, L., C. Lippitt, D. Stow, and R. McCreight, 2011. Near real-time change detection for border monitoring. *Proceedings from the ASPRS Annual Conference*, Milwaukee, WI, May 1-5, 2011.
- Coulter, L. D. Stow, S. Kumar, S. Dua, B. Loveless, G. Fraley, C. Lippitt, and V. Shrivastava, 2012a. Automated co-registration of multitemporal airborne frame images for near real-time change detection. *Proceedings of the ASPRS 2012 Annual Conference*, Sacramento, CA, March 19-23, 2012.
- Coulter, L., D. Stow, Y. H. Tsai, C. Chavis, C. Lippitt, G. Fraley, and R. McCreight, 2012b. Automated detection of people and vehicles in natural environments using high temporal resolution airborne remote sensing. *Proceedings of the ASPRS 2012 Annual Conference*, Sacramento, CA, March 19-23, 2012.
- Coulter, L., D. Stow, Y.H. Tsai, C. Chavis, R. McCreight, C. Lippitt, and G. Fraley, 2012c. A New Paradigm for Persistent Wide Area Surveillance. *Proceedings of the IEEE International Conference on Technologies for Homeland Security*, Waltham, MA, November 13-15, 2012.
- Hope, A., L. Coulter, D. Stow, S. Peterson, and D. Service, 1999. Root Rot Detection in Sugar Beet Using Digital Multispectral Video, *Proceedings of the 20th Asian Conference on Remote Sensing*, Hong Kong, China, November 1999.
- Neubert, M. S. Kropp, L. Coulter, D. Stow, 2008. Vegetation Fire Fuels Mapping in the San Diego City Canyons – A Method Comparison, *GEOBIA 2008*, Calgary, August 2008.
- Stow, D., L. Coulter, A. Hope, J. Kaiser, L. Kaiser, and A. DeNoble, 1998. Frame-based Radiometric Normalization of Multispectral Digital Camera Data for Kelp Monitoring: A Project of the NASA Affiliated Research Center at San Diego State University, *Proceedings of the Annual Meeting of the American Society of Photogrammetry*, Tampa, FL, April 1998.
- Stow, D., D. Chen, and L. Coulter, 2001. Detection of Pixel-Level Land-Cover Changes with Multi-temporal Imagery: Theory and Examples With Imagery of 1 Meter and 1 Kilometer Spatial Resolutions. *Proceedings of MULTITEMP 2001 Workshop*, Trento, Italy, September, 2001.

- Stow, D., L. Coulter, A. Johnson, and A. Petersen, 2002. Monitoring Habitat Reserves Using High Spatial Resolution Image Data, *Proceedings of the Ninth Biennial Remote Sensing Applications Conference*, San Diego, California, April 8-12, 2002.
- Stow, D., and L. Coulter, 2003. Detection of Meter-Scale Land Cover Changes in the Presence of Highly Variable Terrain, *Proceedings of the International Geoscience and Remote Sensing Symposium*, Toulouse, France, July, 2003.
- Stow, D., L. Coulter, Y. Hamada, A. Lieberman, J. Kaiser, J. Jafolla, and L. Hendricks, 2004. Airborne Multispectral and Hyperspectral Imaging for Management of Invasive Plants in Southern California, *Proceedings of MEDECOS 2004 Symposium*, Rhodes, Greece, May 2004.
- Stow, D., H.C. Shih and L. Coulter, 2015. Identification of Urbanization in Ghana Based on a Discrete Classification Approach to Analyzing Dense Landsat Image Stacks, *Proceedings Joint Urban Remote Sensing Event* March - 1 April 2015, Lausanne, Switzerland.

Presented Papers not Published

- Coulter, L., D. Stow, A. Hope, D. Service, T. Schutte, J. Kaiser, and A. Walters, 2002, Landscaped Vegetation Assessment in Urban Environments, High Spatial Resolution Commercial Imagery Workshop, co-sponsored by NASA, NIMA, and USGS, Reston, Virginia, March 25-27, 2002.
- Coulter, L., D. Stow, A. Johnson, and A. Petersen, 2002, Regional Change Monitoring of Habitat Reserve Systems Using Very High Resolution Remotely Sensed Data, High Spatial Resolution Commercial Imagery Workshop, co-sponsored by NASA, NIMA, and USGS, Reston, Virginia, March 25-27, 2002.
- Coulter, L., D. Stow, C. Chavis, C. D. Lippitt, G. Fraley, R. McCreight, S. Kumar, S. Dua, B. Loveless, Rapid High Spatial Resolution Image Assessment of Post-Earthquake Damage, Annual Meeting of the American Society of Photogrammetry and Remote Sensing, Baltimore, March, 2013.
- Hamada, Y., D. Stow, and Lloyd Coulter, 2005, Detecting Invasive Plants in Riparian Habitats of Southern California using Hyperspectral Remote Sensing, Annual Meeting of the Association of American Geographers, Denver, April 2005.
- Stow, D., L. Coulter, J. O'Leary, A. Hope, and J. Franklin, 2000, Monitoring of Habitat Reserve System Using Remotely Sensed Data with Very High Spatial Resolution Imagery, MEDECOS Conference, Cape Town, South Africa, September, 2000.
- Stow, D., L. Coulter, E. Witzum, A. Johnson, A. Wall, J. O'Leary, and A. Hope, 2001, Land Cover Changes Within Habitat Reserve Systems Observed With High Spatial Resolution Image Data. Annual Meeting of the Association of American Geographers, N.Y., March 2001.
- Stow, D. and L. Coulter, 2002, Detection of Pixel level Changes in Habitat Preserves with Meter-resolution Multi-temporal Imagery, Annual Meeting of the Association of American Geographers, Los Angeles, CA., March 2002.
- Stow, D. and L. Coulter, 2003, Application of IKONOS Multispectral Imagery for Habitat Change Analyses of Southern California Shrublands, Annual Meeting of the Association of American Geographers, New Orleans, LA., February/March, 2003.
- Stow, D., L. Coulter, Y. Hamada, and Z. Anguelova, 2006, Detailed Assessment of Shrubland Habitat Change Based on Hierarchical Segmentation and Classification of Airborne Multispectral Imagery, Annual Meeting of the U.S. International Association of Landscape Ecology, San Diego, April 2006.
- Stow, D., Y. Hamada, L. Coulter, and Z. Anguelova. Comparison of Per-Pixel and Object-based Approaches for High Spatial Resolution Monitoring of Vegetation Changes, Annual Meeting of the Association of American Geographers, San Francisco, April 2007.
- Stow, D., Y. Hamada, L. Coulter, and C. Lippitt, Object-Based Monitoring of Fine-Scale Vegetation Changes in Shrubland Habitat, Object-based Image Analysis Symposium, Berkeley, June 2007.
- Stow, D., S. Toure, J. Weeks, C.D. Lippitt, and L. Coulter, Vegetation and Building Changes in Accra, Ghana Based on Multitemporal QuickBird Satellite Image Data, Annual Meeting of the Association of American Geographers, Seattle, April 2011.
- Stow, D. C. Lippitt, S. Toure, L. Coulter and J. Weeks, Object-based Delineation of Urban Neighborhoods of Accra, Ghana from QuickBird Imagery, Annual Meeting of the American Society of Photogrammetry and Remote Sensing, Milwaukee, May, 2011.
- Stow, D., L. Coulter, C.D. Lippitt, G. Fraley, and S. Kumar, Delineation and Classification of Urban Neighborhoods of Accra, Ghana from QuickBird Imagery: Manual vs. Semi-automated Approaches, Annual Meeting of the Association of American Geographers, New York, March 2012.
- Stow, D., C. Lippitt, S. Toure, L. Coulter and J. Weeks, Detection of Earthquake Damage to Critical Infrastructure with Flexible, Repeat-pass Imaging, Annual Meeting of the American Society of Photogrammetry and Remote Sensing, Sacramento, May, 2012.

- Stow, D., L. Coulter, Y-H Tsai, C.D. Lippitt, G. Fraley, and R. McCreight, Detecting Moving Objects With Rapid Succession Airborne Imaging, Annual Meeting of the American Society of Photogrammetry and Remote Sensing, Baltimore, March, 2013.
- Stow, D., L. Coulter, Y-H Tsai, C.D. Lippitt, and R. McCreight, Implementations of a Repeat Station Imaging Approach for Precise Image Registration and Detailed Change Detection at Varying Temporal Resolutions and Durations, Multitemp 2013, Banff, Canada, June 2013.
- Stow, D., C.L. Lippitt, L. Coulter, Y. Hamada, S. Strahm, D. Deutschman, and K. Greer, Monitoring Ecosystem Conditions Based on Changes in Vegetation Growth Form Fractions Estimated Using SPOT Satellite Data and Spectral Mixture Analysis, Association of American Geographers, Los Angeles, April 2013.
- Stow, D., L. Coulter, J. Weeks, M. Benza-Fiocco, S. Toure, and N. Ibanez. The Urban Transition in Ghana and Its Relation to Land Cover and Land Use Change Through Analysis of Multi-scale and Multi-temporal Satellite Image Data, Annual Meeting of the American Society of Photogrammetry and Remote Sensing, Louisville, March, 2014.
- Stow, D., L. Coulter, N. Ibanez, M. Benza, Y.-H. Tsai and J. Weeks. Land Cover and Land Use Change in Ghana from 2000 to 2010: Multi-temporal Landsat ETM+ Image Processing Approaches for a Cloud Prone Limited Study Area, Pecora 19 Symposium, Denver, CO, November 2014.
- Stow, D., H.-C. Shih and L. Coulter, Identification of Urbanization in Ghana Based on a Discrete Approach to Analyzing Dense Landsat Image Stacks, Joint Urban Remote Sensing Event, Lausanne, Switzerland, March, 2015.
- Stow, D., J. Weeks, H.-C. Shih and L. Coulter, Urbanization in Southern Ghana in the First Decade of the New Millennium, Annual Meeting of the Association of American Geographers, San Francisco, April 2016.
- Stow, D., L. Coulter, J. Weeks, Y-H Tsai and F. Mensah. Changes in Agricultural Land Use in Southern Ghana in the First Decade of the New Millennium. Annual Meeting of the Association of American Geographers, Boston, March 2017.
- Stow, D., C. Lippitt, L. Coulter, and A. Loersch An End-to-end Airborne Remote Sensing System for Post-hazard Assessment of Damage to Hypercritical Infrastructure, Annual Meeting of the American Society of Photogrammetry and Remote Sensing, Denver, February, 2018.
- Weeks, J., D.A. Stow, D. Lopez-Carr, R. Engstrom, L. Coulter, S. Toure, N. Ibanez, F. Mensah, and S. Taugher, Environmental Drivers of Internal Migration in Ghana, Annual Meeting of the Association of American Geographers, Miami, April 2014.

Project Reports

- Atchison, P., D. Turner, D. King, W. Barto, D. Stow, J. O'Leary, A. Hope, L. Coulter, P. Longmire, S. Peterson and J. Kaiser, 1998. Use of High Spatial Resolution Multispectral Data to More Efficiently Generate Detailed Vegetation GIS Layers: A Project of the NASA Affiliated Research Center at SDSU, Ogden Energy and Environmental Services, Inc. Partnership, December, 1998.
- Bamberger, W., D. Stow, V. Franck, L. Coulter, D. Chen, A. Hope and J. Kaiser, 1998. New Products from Digital Orthophotographic Quadrangles Using Data Compression: A Project of the NASA Affiliated Research Center at SDSU, San Diego Data Processing Corporation Partnership, January, 1998.
- Cao, L., D. Stow, J. Kaiser, L. Coulter, and D. Johnson, 2003. Smuggler's Blues: Mapping Border Trails with Multispectral Imagery, Geospatial Solutions, 32-38.
- Coulter, L., A. Hope, D. Stow, J. Ryan, and J. Kaiser, 2001. The Utility of High Spatial Resolution Multispectral Imagery for Mapping and Monitoring Vernal Pool Habitat in Transitional Urban Environments A project of the NASA Affiliated Research Center at SDSU, City of San Diego Partnership, August, 2002.
- Coulter, L., D. Stow, A. Hope, J. O'Leary, J. Franklin, A. Johnson, E. Witzum, A. Petersen, P. Longmire, A. Wall, J. Rogan, and E. Almanza, 2003. Regional change monitoring of habitat reserve systems with very high resolution remotely sensed data. NASA Earth Science Directorate Final Report, Food and Fiber Applications of Remote Sensing, Grant # NAG13-99017, 173 pp.
- Coulter, L., D. Stow, Y. Hamada, A. Lieberman, S. Lathrop, J. Kaiser, J. Jafolla, L. Hendricks, J. Gilfillan, and J. Giessow, 2004. Assessment of Hyperspectral and Multispectral Imagery for Mapping Invasive Plant Species within Southern California, A project of the NASA Affiliated Research Center at SDSU, Santa Margarita and San Luis Rey Weed Management Area Partnership, April, 2004.
- Coulter, L., Kropp, S., Stow, D. and Eddie Villavicencio, 2005. Mapping Vegetation Fire Fuels in San Diego City Canyons Using Remotely Sensed Imagery. A project of the NASA Affiliated Research Center at SDSU, City of San Diego Fire-Rescue Department Partnership, June 2005.
- Coulter, L., D. Stow, M. Rosa, S. Lathrop, T. Dougherty, and D. Ochoa, 2009. Assessment of Commercial High Spatial Resolution Imagery for Border Monitoring NASA Research, Education, Application Solutions Program Final Report, June 2009.

- Coulter, L., D. Stow, J. Weeks, A. Hope, M. Tsou, and P. Jankowski, 2009. A border security spatial decision support system driven by remotely sensed data inputs. A project of the NASA Research, Education, and Applications Solution Network (REASoN) program, Grant # NCC13-03007), June, 2009.
- Coulter, L., and D. Stow, 2009. Spatial-Temporal Patterns of Smuggling and Migration. DHS National Center for Border Security and Immigration Year-1 final report, May 2009.
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- Coulter, L., D. Stow, C. Tsai, M. Caldwell, and J. Metcalf, Assessment of High Spatial Resolution Satellite Imagery for Mapping Airport Features, Federal Aviation Administration, Technical Report, September, 2010.
- Coulter, L., and D. Stow, 2011. Pattern Analysis from Remote Sensing Data. DHS National Center for Border Security and Immigration Year-3 final report, August 2011.
- Coulter, L., and D. Stow, 2012. Airborne Detection of Illegal Activity in the Border Zone. DHS National Center for Border Security and Immigration Year-4 final report, September 2012.
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- Hope, A., L. Coulter, D. Stow, D. Service, S. Peterson, J. Kaiser, A. Telck, P. Hickman, J. Svejkovsky, and J. Conger, 2000. Application of High Spatial Resolution Remotely-sensed Imagery to the Management of Sugarbeet Complexes in California's Imperial Valley: A Project of the NASA Affiliated Research Center at SDSU, Holly Agricultural Research Center Partnership, February, 2000.
- Hope, A., L. Coulter, D. Stow, D. Service, T. Schutte, S. Redlin, S. Peterson, M. Lowenfish, J. Kaiser and A. Walters, 2001. Irrigated Vegetation Assessment in Urban Environments: A project of the NASA Affiliated Research Center at SDSU, AgriCast Incorporated Partnership, May, 2001
- Kaiser, L. Cao, L. Coulter, and D. Stow, 2003. Evaluation of a Semi-automated Feature Extraction Method to Delineate and Map Smuggler Trails into the U.S. From Across the Mexican Border, A project of the NASA Affiliated Research Center at SDSU, Conservation Biology Institute Partnership, February, 2003.
- Stow, D. L. Coulter, A. Hope, J. Kaiser, A. DeNoble and L. Deysher, 1997. Frame-based Radiometric Normalization of Multispectral Digital Camera Data for Kelp Monitoring: A Project of the NASA Affiliated Research Center at SDSU, Coastal Resources Associates Partnership, December, 1997.
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- Stow, D., L. Coulter, M. Lowenfish, S. Peterson, A. Hope, and J. Kaiser, 2000. Assessment of the Utility of Image-based Methods for Efficient and Objective Rangeland Monitoring: A Project of the NASA Affiliated Research Center at SDSU, Ranchers Management Corporation partnership, February, 2000.
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Awards and Honors

- * Recipient of San Diego State University (SDSU) Zuma staff award, July 2017. Given by SDSU, this award recognizes outstanding contributions and efforts made by SDSU staff in support of the university, fellow employees and the community.
- * Recipient of SDSU President's Leadership Award, May 2013. Given by SDSU, this award rewards excellence and promotes work that is innovative, forward-thinking, and entrepreneurial.
- * Recipient of the Frea E. Sladek Outstanding Service Award, 2006. Given by the SDSU Research Foundation.
- * First place winner of ERDAS Spatial Modeler contest, 1999. Given by ERDAS, Inc.
- * Recipient of William and Vivian Finch Award in Remote Sensing, 1998. Given by SDSU Department of Geography.