

December 2018

CURRICULUM VITAE

Douglas A. Stow

**Department of Geography
San Diego State University
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Areas of Specialization: Remote sensing, image processing, biophysical geography, geographic information systems, land cover and land use change, semi-arid and coastal ecosystems, post-hazard damage assessment, and wildfire fuels and spread analyses.

Education:

<u>Institution</u>	<u>Years Attended</u>	<u>Degree</u>	<u>Major Field</u>
University of California, Santa Barbara	1974-1985	BA, MA, PhD	Geography
Scripps Institution of Oceanography, University of California, San Diego	1981	Intercampus Transfer	Satellite Oceanography/ Coastal Processes

Title of Dissertation:

Numerical Derivation of the Ocean Surface Velocity Field from Time Sequential Remote Sensing Methods

Academic Positions:

<u>Institution</u>	<u>Rank</u>	<u>Date</u>	<u>Major Subject</u>
Santa Barbara City College	Lecturer	1978-79	Remote Sensing
University of California, Santa Barbara	Lecturer	1978-82	Aerial Photography Environ. Pollution Remote Sensing
San Diego State University	Assistant Professor	1983-87	Geography
	Associate Professor	1987-91	Geography
	Full Professor	1991-2016	Geography
	Distinguished Professor	2016-	Geography

Other Professional Appointments:

<u>Institution</u>	<u>Position</u>	<u>Date</u>
University of California, Santa Barbara	Staff Research	1978-83

Remote Sensing Research Unit San Diego State University, Center for Earth Systems Analysis Research	Associate Co-Director	1987-present
San Diego State University, Geography	Department Chair	1992-1997
San Diego State University, Academic Affairs	Special Assistant	2011-present

Courses Taught:

SDSU

GEOG 101	Principles of Physical Geography
GEOG 104	Geographic Information Science
GEOG 504	Coastal and Submarine Physiography
GEOG 587/591(&L)	Remote Sensing of the Environment
GEOG 588/592(&L)	Intermediate Remote Sensing of the Environment
GEOG 687	Seminar in Remote Sensing
GEOG 688	Advanced Remote Sensing: Integration of RS with GIS
GEOG 688L	Advanced Remote Sensing Lab
GEOG 780	Seminar in Techniques of Spatial Analysis
GS 250	University Seminar

UCSB

GEOG 115A	Aerial Photographic Interpretation
GEOG 115C	Intermediate Remote Sensing of Environment
GEOG 163	Environmental Pollution

SBCC

ES 200	Remote Sensing of Environment
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Courses Developed:

SBCC

ES 200	Remote Sensing of Environment
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SDSU

GEOG 488/587/591-591L	Introductory Remote Sensing of Environment
GEOG 588/592-592L	Intermediate Remote Sensing of Environment
GEOG 688	Advanced Remote Sensing: Integration of RS with GIS
GEOG 688L	Advanced Remote Sensing Lab

Graduate and Undergraduate Theses and Special Studies (C = completed) (I = in progress):

Doctoral Degree

Chair (13)

Dongmei Chen (C), Mary Freeman (C), Yuki Hamada (C), Caitlin Lippitt (C), Christopher Lippitt (C), Andrew Loerch (I), Stuart Phinn (C), Hsaio-Chien Shih (I), Emanuel Storey (I), Sory Toure (C), Yu-Hsin Tsai (C), Kellie Uyeda (C), Sally Westmoreland (C).

Second Member (10)

Michael Beland (C), Magdalena Benza-Fiocco (C), Luc Claessens (C), Jie Dai (I), Ryan Engstrom (C), Debbie Fugate (C), Kristopher Kuzera (C), Anna Lopez (C), John Rogan (C), Kris Taniguchi (C).

Outside Member (6)

Simon Benger, Australian National University (C), Gabriele Caccamo, University of Wollongong (C), Napolean Gudino Elizondo, Center for Scientific Research and Higher Education, Ensenada (C), Kasper Johansen, The University of Queensland (C), Joshua Kelly SDSU-UCSD Geodynamics (I), Michael Nielsen, Stockholm University (C).

Master's Degree

Chair (61)

Zlatina Anguelova (C), Eric Augenstein (C), Patsy Bearden (C), John Bennett (C), Nell Blodgett (C), Brian Bradshaw (C), Alice Brewster (C), Blake Burns (C), Michael Caldwell (C), Lina Cao (C), Caitlin Chason (C), Christopher Chavis (C), Doretta Collins (C), Kevin Contreras (C), Lauren Cooper (C), Jeff Duncan (C), Arman Eshraghi (C), Dillon Fitch (C), Elena Gantcheva-Tarnavsky (C), Keith Greer (C), Yuki Hamada (C), Heidi Hudak (C), Andrew Kerr (C), Jeff LaMantia-Bishop (C), Christian Langevin (C), Steve Lathrop (C), Anna Lieberman (C), Pauline Longmire (C), Martin Lowenfish (C), Martin Miles (C), Betsy Miller (C), Blair Mirka (I), Raghuram Narasimhan (C), Joel Nathanson (C), Bruce Nyden (C), Aaron Petersen (C), Seth Peterson (C), Heather Pray Minnoch (C), Matthew Plummer (C), Kathryn Prosser (C), Diane Rachels (C), Melissa Rosa (C), John Ryan (C), Gavin Schag (I), Eugene Schweizer (C), Hsiao-chien Shih (C), Holly Smit (C), Rachel Snavely (C), Emanuel Storey (C), Rick Sturm (C), Timothy Tidwell (C), Sory Toure (C), Yu Hsin Tsai (C), David Van Mouwerik (C), Kelsey Warkentin (I), Christopher Webb (C), Richard Weiler (C), Sally Westmoreland (C), Jenny Williams (C), Elizabeth Witztum (C), Jeff Yen (I).

Second Member (37)

Andres Abeyta (C), Jason Allen (C), Lisa Baer Wynn (C), Magdalena Benza-Fiocco (C), William Boynton (C), Anders Burvall (C), Lloyd Coulter (C), Dean Daniels (C), Heather Davis (C), Katy Dalton (C), Derren Duburguet (C), Ryan Engstrom (C), Jeff Fleming (C), Lynn Ford (C), Grant Fraley (C), Clint Garrison (C), Liang Guo (C), Nao Hisakawa (C), Joel Kramer (I), John Kimball (C), Kathryn Kozcot (C), Rasmus Larsen (C), Rebecca Leshner (C), Thomas McDowell (C), David McKinsey (C), Christine McMichael (C), Keith Pence (C), Meaghan Salinas (C), Ian Schmidt (C), Dawn Service (C), Timothy Schempp (I), David Shaari (C), Joseph Shandley (C), Debbie Turner (C), Milo Vejraska (C), Weidong Wang (C), Shannon Webber (C).

Third Member (29)

Joseph Adler - Geological Sciences (C), Alex Boisvert - Geological Sciences (C), Kathryn Boyer - Biology (C), Julie Desmond - Biology (C), Swati Dua – Elect. Eng. (C), Stacie Fetjek – Biology (C), Geoffrey Galvin - Geological Sciences (C), Lawrence Gurrola - Geological Sciences (C), Charles Hauser - Geological Sciences (C), Isabelle Kay - Biology (C), Leigh Klatsky - Biology (C), Wendy Kozlowsky – Biology (C), Danielle Lipski - Biology (C), Bernard Loveless – Elect. Eng. (C), Thien Mai - Biology (C), David Mark - Geological Sciences (C), Jean Meltzer - Physical Education (C), Kevin O'Connor – Biology (C), Lorraine Parsons - Biology (C), Christopher Ross - Geological Sciences (C), Susan Rutherford -

Biology (C), Martha Shaw - Geological Sciences (C), Linnea Spears - Biology (C), Gregson Taylor - Geological Sciences (C), Emma Tomaszewski - Biology (I), Brendon Walker – Geological Sciences (C), Donald Wells - Geological Sciences (C), Dustin Wood - Biology (C), Jinhong Zhou - Civil Engineering (C).

Senior Theses (2): Shawn Burkhart (C), Shelly Evans (C).

Ph.D. Dissertations Supervised (completed):

1. Chen, Dongmei. 2001. Multi-resolution Image Analysis and Classification for Improving Urban Land Use/Cover Mapping Using High Resolution Imagery.
2. Freeman, Mary Pyott 2012. An Analysis of Tree Mortality Using High Resolution Remotely-Sensed Data for Mixed-Conifer Forests in San Diego County.
3. Hamada, Yuki. 2010. Characterizing Conditions of California Sage Scrub Communities in Mediterranean-Type Ecosystems Using Remote Sensing.
4. Lippitt, Caitlin. 2013. Remote-Sensing Based Characterization of Herbaceous Vegetation in California Shrublands.
5. Lippitt, Christopher. 2012. Time Sensitive Remote Sensing.
6. Phinn, Stuart. 1997. Remote Sensing and Spatial-Analytic Techniques for Monitoring Landscape Structure in Disturbed and Restored Coastal Environments.
7. Toure, Sory. 2017. Urban Land Cover and Land Use Change in Ghana: Connections to Demography and Health.
8. Tsai, Yu-Hsin. 2018. Monitoring Forest Cover and Land Use Change in Forest Reserves —Connecting Satellite Imagery to Anthropogenic Impacts.
9. Uyeda, Kellie. 2015. Spatial and Temporal Variation in Biomass Accumulation in Southern California Chaparral.
10. Westmoreland, Sally. 2001. Radiometric Correction of Multisensor Imagery.

M.A. Theses Supervised (completed):

1. Anguelova, Zlatina. 2007. Integrating Fire Behavior and Trafficability Models to Assess Fire Danger to Pedestrians within the San Diego-Mexico Border Zone.
2. Augenstein, Eric. 1989. Evaluation of SPOT/HRV Data for Kelp Inventories
3. Bearden, Patsy. 1988. Use of Satellite Remote Sensing to Determine the Distribution of the Pacific Mackerel (*Scomber Japnicus*) in the Eastern North Pacific.

4. Bennett, John. 1999. The Effect of Topography and Vegetation on Highway traffic Noise: An Investigation of Sound Levels in the Alvarado Canyon Transit Corridor of San Diego.
5. Blodgett, Nell. 2007. Investigating the Relationship Between Post-Fire Remnant Vegetation, Fire Behavior, and Fuel Age in Southern California Shrublands.
6. Bradshaw, Brian. 1997. Integrating High Resolution Digital Imagery and Digital Terrain Data for Mapping Restored Salt Marsh Habitat.
7. Brewster, Alice. 1996. Utilizing Geographic Technologies to Analyze the Nesting Habitat Preferences of the Belding's Savannah Sparrow
8. Burns, Blake. 1989. Spectral Reflectance and Spatial Characterization on Arctic Tundra Albedo in Northern Alaska.
9. Caldwell, Michael, 2011. Semi-automated Trail Delineation Based on Aerial Lidar and High Resolution Digital Imagery.
10. Cao, Lina. 2004. Updating Maps of Undocumented Immigrant Trails Along the U.S.-Mexico border Using Airborne Digital Multispectral Imagery.
11. Chason, Caitlin. 2007. Examining the Influence of Short-interval Fire Occurrence on Post-fire Recovery Patterns in Chamise Chaparral.
12. Chavis, Christopher, 2015. Assessing the Accuracy and Repeatability of Automated Photogrammetrically Generated Digital Surface Models from Unmanned Aerial System Imagery.
13. Collins, Doretta. 1991. Determining Land Use Change Through an Integration of Remote Sensing and GIS Technologies.
14. Contreras, Kevin. 2000. The Effects of Wildfire Suppression on Vegetation Type and Patch Pattern in Central Coastal California.
15. Cooper, Lauren. 2003. Testing Very-Low Altitude Digital Imaging for High Resolution Three-Dimensional Modeling.
16. Duncan, Jeff. 1991. Assessing the Relationship Between Spectral Vegetation Indices and Proportional Shrub Cover in Semiarid Environments.
17. Esraghi, Arman. 1995. An Evaluation of ADAR Image Based Methods for Estimating Cover Composition of Major Plant Forms in Restored Riparian Habitats
18. Fitch, Dillon. 2008. The link Between MODIS Vegetation Metrics and Hydrological Response Variables for Watersheds in Mediterranean-type Climate Zones
19. Greer, Keith. 2001. Vegetation Type Conversion in Los Penasquitos Lagoon: An Examination of the Role of Watershed Urbanization

20. Hamada, Yuki. 2005. Detecting Invasive Plant Species in Riparian Habitats of Southern California Using Airborne Hyperspectral Remote Sensing.
21. Hudak, Heidi. 2002. Assessing the Utility of High Resolution Airborne Digital Imagery to Map Benthic Cover for Shallow Waters of St. Vincent and the Grenadines.
22. Kerr, Andrew, 2017. Optimizing Radiometric Fidelity to Enhance Aerial Image Change Detection Utilizing Digital Single Lens Reflex (DSLR) Cameras.
23. Lamantia-Bishop, Jeff. 2010. Hurricane Emergency Response: Detecting Residential Damage Using Object Based Image Analysis.
24. Lathrop, Steve. 2010. Updating Maps of Foot Trail Networks for the US-Mexico Border Zone Using Semi-automatic Feature Extraction Methods and Very High Resolution Remotely Sensed Imagery.
25. Langevin, Chris. 2001. A Neutral Network Approach for Remote Sensing-based Change Detection and Identification: Map-updating in a Dynamic Urban Landscape in Southern California.
26. Lieberman, Anna. 2004. Mapping Fire Effects in Southern California Mediterranean Vegetation Using Remote Sensing Data.
27. Longmire, Pauline. 2001. Use of Very High Spatial Resolution Remotely Sensed Imagery for Assessment of Land Cover Change in the Coastal Shrubland Vegetation of Southern California
28. Lowenfish, Martin. 2003. Using Remote Sensing and Landscape Metrics to Predict the Health of a Semi-Arid Wyoming Rangeland.
29. Miles, Martin. 1990. Incorporating Spatially Varying Parameters Methods Into Remote Sensing Based Water Quality Statistical Modeling.
30. Miller, Betsy, 2005. Detection and Delineation of Vernal Pools Using High Resolution, Multispectral Digital Imagery.
31. Narasimhan, Raghuram, 2009. The Utility of Daily MODIS Products for Analyzing Early Season Vegetation Dynamics within the North Slope of Alaska.
32. Nathanson, Joel. 1992. The Effectiveness of Generating Regional-Scale Land Use GIS Layers from Remotely Sense Data.
33. Nyden, Bruce. 2001. Multi-Temporal Change Analysis of a Southern California Salt Marsh Using Airborne Digital Imagery
34. Petersen, Aaron. 2004. Interannual Arctic Tundra Vegetation Productivity Trends Estimated Using AVHRR-NDVI Datasets with Different Spatial Sampling Schemes.
35. Peterson, Seth. 2000. Using a Multiple Endmember Linear Mixture Model to Study Chaparral Regrowth on MCAS Miramar.

36. Plummer, Mathew. 2018. The Effect of Shadow Removal on the Co-registration Accuracy of Aerial Image Pairs
37. Pray, Heather. 1997. How Sensitive is Environmentally Sensitive Lands Mapping?
38. Prosser, Kathryn. 1995. An Analysis of Image Processing Techniques for Regional Vegetation Mapping in Coastal Southern California.
39. Rosa, Melissa. 2009. Mapping Fuels at the Wildland-Urban Interface for Wildfire Modeling Using Color Ortho-Images and LiDAR Data.
40. Rachels, Diane 2013. Comparison of Chaparral Re-growth Patterns between Santa Ana Wind-Driven and Non-Santa Ana Fire Areas.
41. Ryan, John. 2003. The Human Tide: An Assessment of Procedures for Estimating Daily Peak Beach Attendance.
42. Schweizer, Eugene, 2017. Automating Near Real-Time, Post-Hazard Detection of Crack Damage to Critical Infrastructure.
43. Shih, Hsiao-chien. 2015. 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.
44. Smit, Holly. 2001. Remote Sensing of Deforestation in the Mosquitia Region of Honduras.
45. Snavely, Rachel. 2017. Mapping Vegetation Community Types in a Highly-disturbed Landscape: Integrating Hierarchical Object-based Image Analysis with Digital Surface Models.
46. Storey, Emanuel. 2015. Postfire Regrowth Trajectories of Chamise Chaparral Based on Multi-temporal Landsat Imagery.
47. Sturm, Richard. 1991. Mapping of Pleistocene-Age Shoreline in the Seismically-Active Salton Trough Using Remotely Sensed Thermal Infrared Multispectral Scanning (TIMS) Data.
48. Tarnavsky, Elena. 2003. Spatial and Radiometric Fidelity of High Resolution Airborne Multispectral Imagery in the Context of Land-Cover Change Analyses.
49. Tidwell, Timothy. 2012, Image classification approaches for mapping *Arundo donax* along the San Diego River using high spatial resolution imagery
50. Toure, Sory. 2011. Histogram Curve Matching Approaches for Object-based Image Classification of Land Cover and Land Use.
51. Tsai, Yu-Hsin. 2011. Delineation of New Buildings in Accra, Ghana Using Multitemporal Quickbird Satellite Imagery.
52. Van Mouwerik, David. 1993. Assessing Vegetation Abundance of *Spartina Foliosa* in a Southern California Salt Marsh Using Remote Sensing.

53. Webb, Christopher. 1989. Inlet Dynamics for Southern California.
54. Weiler, Richard. 1988. Spatial Analysis of Land Use Cover: An Investigation into the Scale and Surface Cover Class Divisions.
55. Westmoreland, Sally. 1990. Use Satellite Imagery and Ancillary Data to Update Vector-Coded Geographic Information System.
56. Williams, Jennifer. 2005. Environmental and Forest Fragmentation Effects on Overwintering Monarch Butterflies in Central Mexico.
57. Witztum, Elizabeth. 2001. Analyzing Direct Impacts of Recreation Activity on Coastal Sage Scrub Habitat with Very High-Resolution Multi-spectral Imagery.

Senior Theses

1. Burkhardt, Shawn. 2005. Comparative Analysis of IFAR and Photogrammetrically Derived Digital Elevation Models.
2. Evans, Shelly. 1987. Stream Runoff in Southern California.

Refereed Publications:

1. Stow, D.A. and J.E. Estes, 1981. Landsat and Digital Terrain Data for County-Level Resource Management, *Photogrammetric Engineering and Remote Sensing*, 47(2): 215-222.
2. Estes, J.E., D.A. Stow and J.R. Jensen, 1982. Present and Future Directions for Monitoring Land Use Changes by Remote Sensing Techniques, *Remote Sensing for Resource Management*, J.L. Sanders (ed.), Soil Conservation Society of America.
3. Stow, D.A., 1983. Temporal Analysis section of Manual and Digital Analysis in the Visible and Infrared Regions, Chapter 24, in : J.E. Estes, E.J. Hajic and L.R. Tinney (eds.), *Manual of Remote Sensing*, 2nd ed., Vol. I, Falls Church, VA: American Society of Photogrammetry.
4. Stow, D.A., 1985. Eulerian Velocity Measurements of Hydrodynamic Surfaces Using Optical Flow Methods, *International Journal of Remote Sensing*, 6(12): 1855-1860.
5. Stow, D.A. and H.H. Chang, 1987. Magnitude-Frequency Relationship of Coastal Sand Delivery by a Southern California Stream, *Geo-Marine Letters*, 7(4): 217-222.
6. Stow, D.A., and H.H. Chang, 1987. Coarse Sediment Delivery by Coastal Streams to the Oceanside Littoral Cell, California, *Shore and Beach*, 55(1): 30-40.
7. Stow, D.A., 1987. Numerical Derivation of a Hydrodynamic Surface Flow Field from Time Sequential Remotely Sensed Data, *Remote Sensing of Environment*, 23(1): 1-22.
8. Stow, D.A., 1987. Remotely Sensed Tracers for Hydrodynamic Surface Flow Estimation, *International Journal of Remote Sensing*, 8(3): 261-278.

9. Stow, D.A., 1988. Remote Sensing and Image Processing Requirements for Eulerian Flow Field Estimation, *International Journal of Remote Sensing*, 9(3):351-364.
10. Chang, H.H. and D.A. Stow, 1988. Sediment Delivery in a Semi-Arid Coastal Stream, *Journal of Hydrology*, 99: 201-214.
11. Stow, D., B. Burns and A. Hope, 1989. Mapping Arctic Tundra Vegetation Types Using Digital SPOT/HRV-XS Data: A Preliminary Assessment, *International Journal of Remote Sensing*, 10(8): 1451-1457.
12. Webb, C.K., D.A. Stow and K. Baron, 1989. Morphologic Response of an Inlet-Barrier Beach System to a Major Storm, *Shore and Beach*, 57(4): 37-40.
13. Chang, H.H. and D.A. Stow, 1989. Mathematical Model of Fluvial Sand Delivery, *Journal of Waterway, Port, Coastal, and Ocean Engineering*, 115(3): 311-326.
14. Stow, D.A. and R.C. Smith, 1989. Coastal and Marine Water Resources section of Remote Sensing chapter, in: *Geography in America*, G.L. Gaile and C. J. Willmott (eds.), Columbus: Merrill Publishing.
15. Stow, D., D. Collins and D. McKinsey, 1990. Land Use Change Detection Based on Multi-date Imagery From Different Satellite Sensor Systems, *Geocarto International*, 5(3): 1-12.
16. Webb, C.K., D.A. Stow and H.H. Chang, 1990. Morphodynamic of Southern California Inlets, *Journal of Coastal Research*, 7(1): 167-187.
17. Augenstein, E., D. Stow and A. Hope, 1991. Kelp Inventories Using SPOT Multi-spectral Data, *Photogrammetric Engineering and Remote Sensing*, 57(5): 501-509.
18. Davis, F., D. Quattrochi, M. Ridd, N. Lam, S. Walsh, J. Michaelsen, J. Franklin, D. Stow, C. Johannsen and C. Johnston, 1991. Environmental Analysis Using Integrated GIS and Remotely Sensed Data: Some Research Needs and Priorities, *Photogrammetric Engineering and Remote Sensing*, 57: 689-697.
19. Weiler, R.A. and D.A. Stow, 1991. Characterizing Spatial Scales of Remotely Sensed Surface Cover Variability, *International Journal of Remote Sensing*, 12(11): 2237-2257.
20. Westmoreland, S. and D.A. Stow, 1992. Category Identification for Changed Land-Use Polygons in Integrated Image Processing/ Geographic Information Systems, *Photogrammetric Engineering and Remote Sensing*, 58: 1593-1599.
21. Hope, A., J. Fleming, D. Stow and E. Aguado, 1992. Characterizing Tussock Tundra Albedo on the North Slope of Alaska, *Journal of Applied Meteorology*, 30(8): 1200-1206.
22. Miles, M.M., D.A. Stow and J.P. Jones III, 1992. Incorporating Spatially-Varying Parameter Methods into Remote Sensing-based Water Equality Modeling, in: *Applications of the Expansion Method*, E. Casetti and J.P. Jones, III (eds.), 279-298, London: Routledge.

23. Stow, D.A., 1992. Shoreline Structures section of Structures and Cultural Features chapter, *in: Manual of Air Photo Interpretation*, W. Philipson (ed.)
24. Stow, D., B. Burns and A. Hope, 1993. Spatial, Spectral and Temporal Characteristics of Arctic Tundra Vegetation, *International Journal of Remote Sensing*, 14: 2445-2462.
25. Stow, D., A. Hope and T. George, 1993. Reflectance Characteristics of Arctic Tundra Vegetation from Aerial Radiometry and Videography, *International Journal of Remote Sensing*, 14: 1239-1244.
26. Stow, D., A. Hope, D. McKinsey, H. Pray, 1993. Deriving Dynamic Information on Fire Fuel Distributions in Southern California Chaparral from Remotely Sensed Data, *Landscape and Urban Planning*, 24: 113-127.
27. Hope, A., J. Kimball and D. Stow, 1993. The Relationship Between Tussock Tundra Spectral Reflectance Properties and Biomass, and Vegetation Composition, *International Journal of Remote Sensing*, 14: 1861-1874.
28. Duncan, J., D. Stow, J. Franklin and A. Hope, 1993. Assessing the Relationship Between Spectral Vegetation Indices and Shrub Cover in the Jornada Basin, New Mexico, *International Journal of Remote Sensing*, 14: 3395-3416.
29. Hope, A. and D. Stow, 1993. An Analysis of Tree Mortality in Southern California Using High Spatial Resolution Remotely Sensed Spectral Radiances: A Climatic Change Scenario. *Landscape and Urban Planning*, 24: 87-94.
30. Zhou, J., H. Chang and D. Stow, 1993. A Model for Phase Lag of Secondary Flow in Rivers, *Journal of Hydrology*, 146: 73-88.
31. Hope, A. and D. Stow, 1995. Shortwave Reflectance Properties of Arctic Tundra, in: *Landscape Function and Disturbance in Arctic Tundra*, J. Reynolds and J. Tenhunen (eds.), Ecological Studies, Vol. 120, Springer-Verlag, Heidelberg.
32. Hope A., J. Fleming, G. Vourlitis, D. Stow, W. Oechel and T. Hack, 1995. Relating CO₂ Fluxes to Spectral Vegetation Indices in Tundra Landscapes: Importance of Footprint Definition, *Polar Record*, 31: 245-250.
33. Stow, D., 1995. Monitoring Ecosystem Response to Global Change: Multitemporal Remote Sensing Analyses, J. Moreno and W. Oechel (ed.s), Ecological Studies, Vol. 117, Springer-Verlag, Heidelberg, 254-286.
34. Phinn, S., D. Stow and J. Zedler, 1996. Monitoring Wetland Habitat Restoration Using Airborne Multi-spectral Image Data in Southern California, *Ecological Applications*, 4: 412-422.
35. Phinn, S., J. Franklin, A. Hope and D. Stow, 1996. Biomass Distribution Mapping Using Airborne Digital Video Imagery and Spatial Statistics in a Semi-arid Environment, *Journal of Environmental Management*, 47: 139-164.

36. Phinn, S. and D. Stow, 1996. Use of Remote Sensing to Monitor Vegetation Properties, in: *Restoring Tidal Wetlands: A Scientific Perspective and Southern California Focus*, J. Zedler, (Ed.) La Jolla, California: California Sea Grant College, pp. 88-98.
37. Parrott, R., S. Carnevale, and D. Stow, 1996. Updating Vector Land Use Inventories Using Multi-date Satellite Imagery, in *Raster Imagery in Geographic Information Systems*, S. Morain and S Lopez Baros (eds.), Onward Press, Santa Fe, N.M., pp. 313-321.
38. Stow, D., A. Hope, A. Nguyen, S. Phinn and C. Benkelman, 1996. Monitoring Detailed Land Surface Changes from an Airborne Multispectral Digital Camera System, *IEEE Transactions on Geoscience and Remote Sensing*, 34: 1191-1202.
39. Stow, D., D. Chen, and R. Parrott, 1996. Enhancement, Identification, and Quantification of Land Cover Change, in *Raster Imagery in Geographic Information Systems*, S. Morain and S Lopez Baros (eds.), Onward Press, Santa Fe, N.M., pp. 307-312.
40. Sturm, R., D. Stow and T. Rockwell, 1996. Mapping Pleistocene Shorelines with Thermal Infrared Multispectral Scanner Data in the Seismically-active Salton Trough, *International Journal of Remote Sensing*, 17: 553-575.
41. McMichael, C.E., A.S. Hope, D.A. Stow, and J.B. Fleming, 1997. The Relation Between Active Layer Depth and a Spectral Vegetation Index in Arctic Tundra Landscapes of the North Slope of Alaska, *International Journal of Remote Sensing*, 18: 2371-2382.
42. Stow, D., A. Hope, W. Boynton, S. Phinn, D. Walker and N. Auerbach, 1998. Satellite-Derived Vegetation Index and Cover Type Maps for Estimating CO2 Flux for Arctic Tundra Regions, *Geomorphology*, 21: 313-327.
43. 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.
44. Stow, D., 1999. Reducing Misregistration Effects for Pixel-level Analysis of Landcover Change, *Remote Sensing Letters - International Journal of Remote Sensing*, 20: 2477-2483.
45. Stow, D., S. Daeschner, W. Boynton, and A. Hope, 1999. Arctic Tundra Functional Types by Classification of Single Date and AVHRR Bi-weekly NDVI Composite Data Sets, *International Journal of Remote Sensing*, 21: 1773-1779.
46. Hope, A., K. Pence, and D. Stow, 1999. Response of the Normalized Difference Vegetation Index to Varying Cloud Conditions In Arctic Tundra Environments, *International Journal of Remote Sensing*, 20: 207-212.
47. 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.

48. McMichael, C., A. Hope, D. Stow, J. Fleming, G. Vourlitis and W. Oechel, 1999. Estimating CO₂ Exchange in Arctic Tundra Ecosystems Using a Spectral Vegetation Index, *International Journal of Remote Sensing*, 20: 683-698.
49. Phinn, S., D. Stow, and D. Van Mouwerik, 1999. Remotely Sensed Estimates of Vegetation Structural Characteristics in Restored Wetlands, Southern California, *Photogrammetric Engineering and Remote Sensing*, 65: 485-493.
50. 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.
51. Oechel, W., G. Vourlitis, J. Verfaillie, Jr., T. Crawford, S. Brooks, E. Dumas, A. Hope, D. Stow, B. Boynton, V. Nosov, and R. Zulueta, 2000. A Scaling Approach for Quantifying the Net CO₂ Flux of the Kuparuk River Basin, Alaska, *Global Change Biology*, 6: 1-14.
52. Stow, D., A. Hope, D. Richardson, D. Chen, C. Garrison, and D. Service, 2000. Potential of Colour-Infrared Digital Camera Imagery for Inventory and Mapping of Alien Plant Invasions in South African Shrublands, *International Journal of Remote Sensing*, 21: 2965-2970.
53. Vourlitis G., W. Oechel, A. Hope, D. Stow, W. Boynton, J. Verfaillie, Jr., R. Zulueta, and S. Hastings, 2000. Physiological Models for Scaling Plot Measurements of CO₂ Flux Across an Arctic Tundra Landscape, *Ecological Applications*, 10: 60-72.
54. Chen, D., D. Stow, J. Kaiser, and S. Daeschner, 2001. Detecting and Enumerating New Building Structures Utilizing Very-high Resolution Image Data and Image Processing, *Geocarto International*, 16: 69-81.
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Manuscripts Submitted to Refereed Journals or Books

1. Chen, H. L., RR. Lewison, L. An, Y.H. Tsai, D. Stow, L. Shi and S. Yang, submitted. Assessing the effects of payments for ecosystem services programs on forest structure and species diversity *Journal of Applied Ecology*.
2. Coulter, L., M. Plummer, N. Zamora, D. Stow and R. McCreight, submitted. Assessment of Automated Multitemporal Image Registration using Repeat Station Imaging Techniques, *GIScience & Remote Sensing*.
3. Plummer, M., D. Stow, L. Coulter, E. Storey and N. Zamora, submitted. Reducing Shadow Effects on the Co-registration of Aerial Image Pairs, *Photogrammetric Engineering and Remote Sensing*.
4. Stow, D., P. Riggan, G. Schag, R. Tissell and J. Coen, submitted *International Journal of Remote Sensing*.
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68. Stow, D., A. Lopez, and J. Weeks, 2006, Semi-automated Delineation and Classification of Residential Land Use Types in Accra, Ghana Based on Quickbird Satellite Data, Annual Meeting of the Association of American Geographers, Chicago, March 2006.
69. 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.
70. Weeks, J., A. Hill, D. Stow, A. Getis, and D. Fugate, 2006, The Impact of Neighborhood Structure on Health Inequalities in Accra, Ghana, Annual Meeting of the Population Association of America, Los Angeles, March 2006.
71. 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.
72. 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.

73. Stow, D., C. Lippitt, and J. Weeks, Delineation of Neighbourhoods of Accra, Ghana Based on Segmentation of Quickbird Imagery, GEOBIA 2008, Calgary, August 2008.
74. Stow, D., D. Fitch, A. Hope, and S. Rey, MODIS Vegetation Metrics as Indicators of Hydrological Response in Watersheds of California Mediterranean-type Climate Zones, American Geophysical Union Fall Meeting, San Francisco, December 2008.
75. Stow, D., C. Chason, and C-R Lee, Multiple-pixel Classification Strategies in Support of Object-based Image Analyses, Annual Meeting of the Association of American Geographers, Las Vegas, March 2009.
76. Stow, D. (Moderator), S. Ambrose, V. Ambrosia, and M. Rosenberg, Disaster Technologies: Problems and Solutions With a Focus on Night Time Imaging and Fire Response, Panel Discussion, Thermal Sensing Workshop, Monterey Naval Postgraduate School, Monterey, September 2009.
77. Stow, D., G. Fraley, C. Lippitt, and R. McCreight, Flexible and Inexpensive Airborne Color Infrared Imaging System, Association of Pacific Coast Geographers Annual Meeting, October 2009.
78. Stow, D., S. Toure, C. Lee, C. Chason, and C. Lippitt, Frequency Distribution Signatures and Classification of Within-Object Pixels, GEOBIA 2010, Ghent, Belgium, June 2010.
79. 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.
80. 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.
81. Stow, D., Lessons Learned on Border Area Projects. San Diego, Workshop on Remote Sensing Applications for US-Mexico Border Water Management, June, 2011.
82. 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.
83. 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.
84. 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.
85. 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.

86. 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.
87. 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.
88. 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.
89. Stow, D., Y-H Tsai and L. An. Forest Canopy Cover Change in Fanjingshan National Nature Reserve Annual Meeting of the Association of American Geographers, Tampa, April 2014.
90. 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.
91. 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, Tampa, April 2014.
92. Benza, M., J. Weeks, D. Stow, D. Lopez-Carr and K. Clarke. Fertility and Urban Context: A case study from West Africa using remotely sensed imagery and GIS, Annual Meeting of the Association of American Geographers, Chicago, April 2015.
93. Shih, H.C. and D. Stow. Determining the Type and Starting Time of Land Cover and Land Use Change Based on Discrete Analyses of Dense Landsat Imagery, Annual Meeting of the Association of American Geographers, Chicago, April 2015.
94. Toure, S. and D. Stow. Land Cover and Land Use Change Analysis Using Multi-Spatial Resolution Data and Object-Based Image Analysis, Annual Meeting of the Association of American Geographers, Chicago, April 2015.
95. Engstrom, R., A. Sandborn, Q. Yu, J. Burgdorfer, D. Stow, J. Weeks and J. Graesser, 2015. Mapping Slums Using Spatial Features in Accra, Ghana. Proceedings Joint Urban Remote Sensing Event March - 1 April 2015, Lausanne, Switzerland
96. 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.
97. Storey, M., D. Stow and J. O'Leary, Assessing postfire recovery of chamise chaparral based on spectral vegetation index trajectories derived from multi-temporal Landsat imagery, Annual Meeting of the Association of American Geographers, San Francisco, April 2016.

98. 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.
99. Toure, S., J. Weeks, D. Lopez-Carr and D. Stow, Understanding the Impacts of Built Environment on Health from Perspectives of Residential Spatial Differentiation, Annual Meeting of the Association of American Geographers, San Francisco, April 2016.
100. 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.
101. 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.
102. Stow, D. Drone Imaging for Science and Public Service Applications, Annual Meeting of the American Association for the Advancement of Science, Austin, February, 2018.
103. Stow, D. Repeat station imaging: An Approach to Highly-accurate and Time-sensitive Change Detection, Annual Meeting of the Association of American Geographers, New Orleans, April 2018.

Other Articles and Project Reports:

1. Hope, A. and D. Stow (eds.), 1987. Response, Resistance, Resilience and Recovery from Disturbance in Arctic Ecosystems, Report of The R4D Data Extrapolation Workshop, Department of Energy.
2. Stow, D., S. Sperry, R. Parrott, S. Camarata and F. Mertz, 1991. Efficient Updates of Vector-Coded Geographic Information Systems Using Remotely Sensed Data, NASA Earth Observations Commercialization and Application Program Final Report.
3. Franklin, J. and D. Stow, 1993. An Examination of the Utility of Satellite Imagery for Mapping Vegetation in San Diego County, San Diego Associations of Government Final Report.
4. Stow, D. and A. Eshraghi, 1993. High Resolution Digital Imaging for Habitat Restoration Projects, State of California Department of Transportation Final Report.
5. Stow, D., S. Phinn, L. Deysher and J. Zedler, 1995. High Resolution Digital Imaging for Environmental Monitoring Applications, Southern California Edison Final Report.
6. 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.
7. 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.

8. 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.
9. Brewster, A., D. Stow, V. Frank, E. Almanza and D. Kamada, 1998. An ADAR Based Habitat Monitoring System, Report for Southern California Edison, July, 1998.
10. Davidson, R., R. Miles, D. Stow, K. Yanow, A. Hope and J. Kaiser, 1998. 3-D Virtual Reality Modeling of Digital Elevation, Remotely Sensed and GIS Data for Rapid Wireless Communications Network Design and Display: A Project of the NASA Affiliated Research Center at SDSU, Qualcomm, Inc. Partnership, February, 1998.
11. Stow, D., L. Coulter, C. Langevin, D. Service and J. Kaiser, 1998. Contextual Classification of Changing Land Use Using Multiple Geo-spatial Data Sources: A Project of the NASA Affiliated Research Center at SDSU, Shenandoah Mountain Geographics Partnership, December, 1998.
12. Wesser, A., L. Tucker, D. Stow, D. Chen, S. Daeschner, and J. Kaiser, A. DeNoble, 1998. A Microfeature Change-Detection System Utilizing Very-high Resolution Image Data and Image Processing: A Project of the NASA Affiliated Research Center at SDSU, Aerial Fotobank Partnership, December, 1998.
13. 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.
14. 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.
15. 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
16. Lukinbeal, C., J. Kaiser, J. Ryan, D. Stow, K. McCurdy and W. Jones, 2001. Using Remote Sensing, GIS and Visualization Techniques to Optimize Location Management for a Regional Film Production Market: A project of the NASA Affiliated Research Center at SDSU, San Diego Film Commission Partnership, January, 2001.
17. Stow, D., A. Hope, L. Coulter, J. Kaiser, D. Service, S. Redlin, K. Schutte and A. Walters, 2001. Utility of ERDAS Imagine Expert Classifier to Improve Image-based Mapping of Irrigated Vegetation in Urban Environments: A project of the NASA Affiliated Research Center at SDSU, AgriCast Incorporated Partnership, May, 2001.
18. 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.

19. O'Leary, J.F. and D. Stow, 2002. Vegetation and Land Cover Mapping on Marine Corps Air Station Miramar, San Diego, California. Final Report produced for Marine Corps Air Station Miramar, Environmental Management Department and Southwest Division, Naval Facilities Engineering Command, San Diego, CA. Produced by the Center for Earth Systems Analysis and Research, Department of Geography, San Diego State University. 65 p., August, 2002.
20. Stow, D., J. Kaiser, L. Coulter, L. Cao, J. Ryan, K. Krauss, 2002. Evaluation and Use of Helicopter Collected High Resolution, Multispectral Imagery to Map Smuggler Trails into the U.S. across the Mexican Border. A project of the NASA Affiliated Research Center at SDSU, Blackhawk Helicopters, Inc. Partnership, April, 2002.
21. Tsou, M., L. Guo, J. Kaiser, E. Almanza, and D. Stow, 2002. Web-based Geospatial Information Services and Analytic Tools for Natural Habitat Conservation and Management A project of the NASA Affiliated Research Center at SDSU, Ed Almanza and Associates, Inc. Partnership, August, 2002.
22. 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.
23. Coulter, L., D. Stow, A. Hope, J. O'Leary, J. Franklin, A. Johnson, E. Witztum, 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.
24. 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.
25. Stow, D. E. Tarnavsky, L. Coulter, and S. Carnevale, 2003. Optimum Image Acquisition Procedures for Generating Very High Resolution Multi-temporal Data Sets. A project of the NASA Affiliated Research Center at SDSU, San Diego Association of Governments Partnership, August, 2003.
26. Stow, D., M. Niphadkhar, and J. Ryan, 2003. Determining the User Community and Commercial Market for High Resolution Image-Derived Products in Support of Detailed Vegetation Monitoring. A project of the NASA Affiliated Research Center at SDSU, Conservation Biology Institute Partnership, May, 2003.
27. 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.
28. Stow, D., J. Kaiser, M. Niphadkhar, E. Tarnavsky, A. Lieberman, L. Coulter, and L. Guo, 2004. Monitoring Changes in Fuel Moisture Conditions of Southern California Chaparral Based on Time

Series of MODIS-Derived Indices, a project of the NASA Affiliated Research Center at SDSU, California Department of Forestry and Fire Protection Partnership, March, 2004.

29. 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.
30. Hamada, Y., D. Stow, L. Coulter, A. Lieberman, S. Lathrop, J. Kaiser, J. Jafolla, L. Hendricks, J. Gilfillan, and J. Giessow, 2005. Assessment of Hyperspectral and Multispectral Imagery for Mapping Invasive Plant Species within Southern California. A project of the NASA Affiliated Research Center at SDSU, Surface Optics Corporation, Inc. and Santa Margarita and San Luis Rey Weed Management Area Partnership, March, 2005.
31. Stow, D., M. Niphadkar, J. Kaiser, P. Scully and T. Porter, 2005. Monitoring Changes in Live Fuel Moisture Conditions of Southern California Chaparral Based on Time Series of MODIS-derived Indices. A project of the NASA Affiliated Research Center at SDSU, California Department of Forestry and Fire Protection, San Diego Unit Partnership, June 2005.
32. 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.
33. Coulter, L., D. Stow, M. Tsou, A. Hope, P. Jankowski, and J. Weeks, 2009. A Border Security Spatial Decision Support System Driven by Remotely Sensed Data Inputs, NASA Research, Education, Application Solutions Program Final Report, June 2009.
34. Coulter, L., D. Stow, M. Tsou, A. Hope, P. Jankowski, Spatial-temporal Patterns of Smuggling and Migration, National Center for Border Security and Immigration SDSU Year 1 Report, August 2009.
35. 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.
36. Stow, D., J. Weeks, R. Engstrom, L. An, L. Coulter, D. López-Carr, M. Benza, S. Toure, H. Shih, Y. Tsai, F. Mensah, A. Sandborn, S. Crook, Q. Yu, N. Ibanez, H. Taflin, A. Kerr, A. Copenhaver, Yang Qi, J. Burgdorfer, and K. Clarke. 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, NASA Land Cover and Land Use Change Interdisciplinary Science Program Earth Science Division, Science Mission Directorate, NASA Award Number: NNX12AM87G, Summary of Research Results, October 2016.

Scholarly Awards and Honors:

1. SDSU Summer Faculty Fellow, 1984.
2. Remote Sensing Society; Best letter for 1985, for "Eulerian Velocity Measurements of Hydrodynamic Surfaces using Optical Flow Methods." In *Remote Sensing Letters - International Journal of Remote Sensing*.

3. SDSU Meritorious Performance and Professional Promise (MPPP) Award, 1987-88 for Professional Growth.
4. SDSU Meritorious Performance and Professional Promise (MPPP) Award, 1989-90 for Professional Growth, Teaching Effectiveness and Service.
5. SDSU Alumni Outstanding Faculty Award for the University, 1996.
6. 2004 Leica Geosystems Award for Best Scientific Paper in Remote Sensing (*Photogrammetric Engineering and Remote Sensing* journal) awarded by American Society of Photogrammetry and Remote Sensing (John Rogan, lead author).
7. 2004 Leica Geosystems Third Place Award for Best Applications Paper in Remote Sensing (*Photogrammetric Engineering and Remote Sensing* journal) awarded by American Society of Photogrammetry and Remote Sensing (Dongmei Chen, lead author).
8. Association of American Geographers (AAG) Remote Sensing Specialty Group (RSSG), Outstanding Contributions in Remote Sensing Award, 2004.
9. SDSU President's Top 25 Award, April, 2004.
10. Phi Beta Kappa – SDSU Faculty Lecturer 2008-09
11. Presidential Leadership Award, San Diego State University, 2009
12. SAIC John Estes Memorial Teaching Award – American Society for Photogrammetry and Remote Sensing, 2013
13. American Society for Photogrammetry and Remote Sensing, ASPRS Fellow Award 2014.
14. Albert W. Johnson University Research Lectureship, SDSU, 2016.
15. John Jensen Distinguished Lecture Series, second annual lecturer, New Orleans, LA, 2018.

Research Contracts and Grants:

1. California Institute of Technology President's Fund (NASA) grant; Mapping Pleistocene Shoreline Deposits from Multi-spectral Thermal Infrared and other Remotely Sensed Data for Seismically-active Salton Trough, \$36,000. 1986-1987
2. Principal Investigator, SDSU Grants-in-Aid for Faculty Research; An Assessment of Pacific Mackerel Habitat Using Remotely Sensed Data, \$2,000. 1987.
3. Co-Investigator, California Sea Grant Program (NOAA) grant; Maintenance of Entrance Channels of Coastal Lagoons and River Mouths, \$180,000. 1986-1989.
4. Co-Investigator, Department of Energy subcontract; R4D Arctic Tundra Project, \$460,000. 1987-1991.

5. Co-Investigator, State of California Department of Parks and Recreation Contract; Ecological Monitoring at Rancho Cuyamaca State Park, \$65,000. 1987-93.
6. Principal Investigator, NASA EOCAP Contract, Efficient Updates of Vector-Coded Geographic Information Systems Using Remotely Sensed Data, \$600,000. 1988-1991.
7. Collaborator, NSF Grant, Jornada Long Term Ecological Research Program, \$700,000. 1989-93
8. Principal Investigator, High Resolution Digital Imaging for Habitat Restoration Projects (Riparian Ecosystems), \$35,000, California Dept. of Transportation. 1992-94.
9. Principal Investigator, High Resolution Digital Imaging for Coastal Wetland Restoration Projects, \$300,000, Southern California Edison. 1992-95.
10. Co-Investigator, Regional Estimates of CO₂ Flux for Arctic Tundra Ecosystems, NSF Grant, (Walt Oechel, P.I.), \$1,400,000. 1993-1998.
11. Co-Investigator, GIS Mapping Project for Bi-national Coordinated Land-Use Planning and Education in the Tijuana River Watershed, NOAA Contract, (Richard Wright, P.I.) \$136,000. 1994-1995.
12. Co-Investigator, High Resolution Multispectral Imaging for Environmental Monitoring Applications, NASA and Positive Systems, Inc. Subcontract, (Cody Benkelman, P.I.), \$195,000. 1994-1996.
13. Principal Investigator, Estuarine Wetland and Watershed Inventory Using NOAA's CoastWatch Change Analysis Project Protocol in California's Central Coast, NOAA and Calif. Coastal Commission, \$13,000. 1995-96.
14. Principal Investigator, Use of High Resolution Digital Camera Data to Map Wildlife Habitat in the Torrey Pines State Park Reserve, State of California Parks and Recreation and Los Penasquitos Lagoon Foundation, \$12,000. 1996-1997.
15. Co-Investigator, Geo-spatial Technologies for Monitoring Shrubland Habitats in Southern California, Electrical Power Research Institute Contracts, (Ed Almanza, P.I.), \$60,000. 1997-1999.
16. Principal Investigator, NASA Visiting Investigator Program Affiliate Center, NASA Contract, \$475,000, 1997-1999.
17. Co-Investigator, NSF/DOE/NASA TECO Program, Patterns and Controls of Temporal Variation in CO₂ Sequestration and Loss from Arctic Ecosystems, National Science Foundation, (Walt Oechel, P.I.) \$260,000, 1998-2000.
18. Co-Investigator, Regional Variability in Carbon and Energy Fluxes: Towards a Global Synthesis, NSF Land-Air-Ice-Interactions ATLAS Study Grant, (Walt Oechel, P.I.), \$2,100,000 1999 – 2004.
19. Principal Investigator, US Department of Transportation, Subcontract for Shenandoah Mountain Geographics, Inc., Updating Land Use Information in Support of Transportation Planning, \$32,000, 1999-2000.

20. Principal Investigator, NASA Remote Sensing Applications Research in Agriculture, Forestry and Range Resources Management, Regional Change Monitoring of Habitat Reserve Systems with Very High Resolution Remotely Sensed Data, \$190,000/yr., 1999-2003.
21. Principal Investigator, California Department of Fish & Game – Subcontract to the City of San Diego, Application of Digital Imaging Technologies for Monitoring and Managing MSCP/NCCP Reserves, \$141,000 1999-2001.
22. Co-Investigator, Operational Monitoring of Alteration in Regional Land Cover Using Multitemporal Remote Sensing Data, NASA Land-Cover and Land-Use Change Program Grant (Janet Franklin, P.I.), \$360,000, 1999–2003.
23. Co-Investigator, Applying Remote Sensing/GISA to Arab Fertility, NSF Geography and Regional Science Program Grant (John Weeks, P.I.), \$350,00, 2001-2004.
24. Co-Investigator, San Diego County-Baja California Water Quality Prediction and Monitoring Program. California State Water Resources Control Board. (Richard Wright, P.I.), \$190,000. 6/2001 through 8/2003.
25. Principal Investigator, City of San Diego, Vernal Pool Change Detection at the Otay Mesa Vernal Pool Restoration Site and Habitat Quality Evaluation in Marron Valley, \$53,000, 2002-2003.
26. Principal Investigator, NASA Affiliated Research Center, Earth Science Applications Division, \$992,000 2000-2006.
27. Principal Investigator, Spatial Decision Support System for Border Security, NASA Research Applications and Education Solutions Network, Earth Science Applications Division, \$1,800,000, 2003-2008.
28. Co-Investigator, Intra-urban Health Assessed by Remote-sensing and GIS, National Institute of Child Health and Human Development, (John Weeks, P.I.), \$208,000, 2004-2006.
29. Co-Investigator, Regional Hydrological Response of Semi-Arid Mediterranean Climate Watersheds to Land-Cover/Land-Use Variability, NASA Land-Cover and Land-Use Change, (Allen Hope, P.I.), \$586,000, 2005-2008.
30. Co-Investigator, Health, Poverty and Place: Modeling Inequalities in Accra Using Remote Sensing and GIS, National Institute of Child Health and Human Development, (John Weeks, P.I.), \$2,500,000, 2007-2013.
31. Co-Investigator, Office of National Drug Control Policy, Counter-Drug Technology Assessment Center Target Mapping System (Eric Frost, P.I.), \$2,200,000, 2007-2008.
32. Co-Investigator, Department of Homeland Security, Spatial-temporal Patterns of Smuggling and Migration, National Center for Border Security and Immigration, University of Arizona, \$430,000, July 2008- June 2014.
33. Principal Investigator, Federal Aviation Administration, Satellite Imagery Assessment, \$111,000, January – December 2010.

34. Principal Investigator, US Forest Service, Airborne Remote Sensing to Enable Hazardous Fuels Reduction, Forest Health Protection, Rehabilitation and Hazard Mitigation Activities on Federal Lands, \$435,000, March 2010 – February 2013.
35. Principal Investigator, Department of Homeland Security, Rapid, High Spatial Resolution Image Assessment of Post-Earthquake Damage Assessment, \$245,000, July 2011 – February 2013.
36. Co-Investigator, Evaluation and Refinement of Vegetation Monitoring Methods for the San Diego Multispecies Conservation Program (MSCP), San Diego Association of Governments, (Douglas Deutschman, P.I.), \$200,000, January 2012-December 2013.
37. Principal Investigator, NASA Interdisciplinary Science, Earth Science Division, 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, \$992,960 2012-2015.
38. Co-Investigator, NSF Dynamic Coupled Natural-Human Systems Program, Impacts of Ecosystem Service Payments in Coupled Natural and Human Systems (Li An, P.I.), \$1,500,000, 2012-2017.
39. Principal Investigator, NSF Infrastructure Management and Extreme Events, Rapid and Detailed Assessment of Post-hazard Damage to Critical Infrastructure, \$365,320, 2014-2016.
40. Co-Principal Investigator, US Department of Transportation, Development of a Remote Sensing Network for Time-sensitive Detection of Fine Scale Damage to Transportation Infrastructure, \$146,500, 2014-2016.
41. Principal Investigator, NSF Geography and Spatial Sciences, Landscape-level Measurements of and Controls on Wildfire Spread Rates, \$295,000, 2016-2019.
42. Co-Principal Investigator, US Forest Service, Extension of MODIS-based drought-stress product and automation of airborne imagery processing, \$12,865, 2016.
43. Co-Principal Investigator, US Navy, Vegetation Mapping at NALF San Clemente Island, \$345,700, 2015-2018.
44. Co-Principal Investigator, US Forest Service, Effects of Drought Stress and Forest Management on Fire Behavior and Post-Fire Forest Structure in a Western Coniferous Forest, \$44,025, 2018 – 2019.
45. Co-Principal Investigator, US Navy, Shrub Cover Monitoring and Sensitivity Analyses of Vegetation Community Maps for San Clemente Island, CA, \$226,861, 2018-2019.

Patents and Intellectual Property

COULTER L 2: Systems, methods and devices for repeat pass imaging for wide area intermittent video" patent number 9,756,293 (Contributor)

COULTER L 2 CON: WIDE AREA INTERMITTENT VIDEO USING NON-ORTHORECTIFIED FEATURE MATCHING IN A LONG PERIOD AERIAL IMAGE CAPTURE WITH PIXEL-BASED GEOREFERENCING, U.S. Patent Application no 15695821 (Contributor)

STOW D 1: IMAGE STATION MATCHING, PREPROCESSING, SPATIAL REGISTRATION AND CHANGE DETECTION WITH MULTI-TEMPORAL REMOTELY-SENSED IMAGERY, Patent no. 9977978 (Co-inventor)

STOW D 1 CON: IMAGE STATION MATCHING, PREPROCESSING, SPATIAL REGISTRATION AND CHANGE DETECTION WITH MULTITEMPORAL REMOTELY-SENSED IMAGERY, Application No. 15/960,298; pending claims (Co-inventor)

Journal Editorial Responsibilities:

Associate Editor, *International Journal of Remote Sensing*, 2009 – present.

Editorial Board Member, *GIScience and Remote Sensing*, 2005– present.

Participation in Professional Associations:

American Association of Geographers, Washington D.C.; Full Member.

American Geophysical Union, Washington D.C.; Full Member.

American Society of Photogrammetry and Remote Sensing, Falls Church, Virginia; Full Member.

NASA Land Processes Distributed Active Archive Center, Science Panel Member, 1995-2007.

Phi Kappa Phi Scholarly Association, Faculty Member

Phi Beta Delta International Scholars Society, Faculty Member

SPOT Image Corporation (SICORP) Academic Advisor Committee, Reston, Virginia; Council Member.

Remote Sensing Specialty Group - Association of American Geographers, Regional Councilor, 1992-1995, Chair, Awards Committee, 2004 to present, Program Chair, 1992 and 2003.

Co-Chair and Student Volunteer Coordinator, American Society for Remote Sensing and Photogrammetry Annual Meeting, San Diego, November 2008 – June 2010.

Adviser, SDSU Student Chapter, American Society for Remote Sensing and Photogrammetry, 2009-present.

Consultant Services

Analysis of the Reliability of Photogrammetric Estimates of Culvert Sizes Using Stereo Ground Photographs, Higgs, Fletcher & Mack, Attorneys-at-Law; expert witness; legal ramifications of photogrammetric measurements of engineering structures, 1986.

Interpretation of Aerial Photographs to Measure Off-Road Vehicle (ORV) Disturbance in the California Desert District, U. S. Bureau of Land Management; principal consultant, designer of field and image

sample design, supervisor of student intern; learned how to develop sampling strategies for large area estimates of ORV-related disturbances of deserts, 1989.

Remote sensing system evaluation for the development of an inland wetland monitoring system. Scientific and technical consultant to Environmental Science and Engineering, Inc. of Tampa, Florida for the West Coast Regional Water Supply Authority in Florida, 1996-98.

Precise Automatic Image Co-registration Tools to Enable Pixel-level Change Detection, scientific and technical consultant to Positive Systems, Inc. for NASA Small Business Innovative Research project, Contract NNS04AA28C, 2004-06.

Committee Assignments and Other University Service

California State University System:

Chair, Remote Sensing Committee, State-wide GIS Specialty Center, 2003-present.

San Diego State University:

Member, Areas of Excellence Cluster Hiring – Faculty Review Committee April to May 2013.

Special Assistant for Enrollment Management, Academic Affairs, January 2011 to August 2012.

Reviewer, Department of Geological Sciences Program Review Committee, 2008.

Member, Intercollegiate Athletics Authority, 1998-present.

Member, Campanile Foundation, Athletics Sub-committee, 2008-09.

Member, Enrollment Management Committee, 2004 - present Chair, Intercollegiate Athletics Authority Board, 2000 – 2006.

Chair, Governance and Compliance Subcommittee, NCAA Athletics Program Review, 2004-06.

Reviewer, Ad hoc Committee for Review of Joint Doctoral Program in Ecology, SDSU-UC Davis, Spring 2005.

Chair, Associate Vice President of Research and Dean of Graduate Studies Search Committee, AY 2002-03.

Associate Vice President of Research and Dean of Graduate Studies Search Committee, AY 2001-02 and 2004-05.

SDSU Foundation General Manager Search Committee, AY 1999-2000.

Chair, Academic Progress & Eligibility Committee, Intercollegiate Athletics Authority, 1998-2000.

Faculty Merit Increase Appeals Committee for AY 1998-99, Dec. 1999.

Middle East Desert Development Program, Advisor to SDSU Foundation and Workshop Facilitator.

Instructor, University (Freshman) Seminar, Fall Semesters 1994-1996.

Panel Member, Formation of a Center for Applied Lands Research at SDSU.

Presented “The CESAR lab as an integrated instructional and research facility” to San Diego high school councilors, 1994.

Presented “The CESAR lab as an integrated instructional and research facility” to Executive Vice Chancellor Molly Broad, 1993.

Panel discussion on the Teacher-Scholar Model at San Diego State University, WASC Accreditation Visit, 1993.

Associate Dean of Graduate Division Search Committee, 1991-1992.

Graduate Council and Graduate Curriculum Committee, Fall 1988 -present.

Center for Marine Studies, Fall 1986 - Spring 1988; member of Executive Committee.

Systems Biology Research Group, Fall 1988 - 1999; faculty member of Advisory Committee.

Commencement Marshall, 1987, 1989, 1991, 1997, 1999, 2000-2003, 2005-2008.

Graduate Division, Spring 1987, reviewer of summer faculty fellowship proposals.

College of Arts & Letters:

Sabbatical and Professional Leaves Committee, 2006-2008.

Research Committee, Fall 1984- Spring 1986, Fall 1997 - Spring 1999.

Outstanding Professor Selection Committee, 1992-1995, 1997-1999.

Presentation of College of Arts & Letters Showcase, Counselors’ Conference, 1994.

Personnel Committee (Promotions and Tenure), 1991-92, 2010-11.

SSRL Steering Committee, Spring 1985 (sabbatical replacement).

Department of Geography:

Department Chair, Fall 1992 - Fall 1997.

Doctoral Program Adviser, Fall 1998 - 2013.

PhD Committee, Fall 1991 – 2015.

Masters Program Advising Committee, ex-officio member, 1998 – 2013.

Center for Earth Systems Analysis Research, Fall 1986 - present; Co-director and a principal investigator; oversee purchases of equipment and supplies, training, etc.
Computing Committee, 2002 - 2010.

Assessments Committee, Fall 2000 - 2003.

Policy Advisory Committee (elected member): Fall 1985 - Spring 1987, Fall 1988 - Spring 1989; chair Fall 1988 - Spring 1989; Fall 2002 - 2004; Fall 2006-2008; Fall 2014-present, advise Department Chair, initiate and enforce departmental policy, select graduate assistants.

Personnel Committee; most years since 1990.

Hiring Committee; Fall 2013-Fall 2015.

Colloquium presentation "Commercial and Public Sector Applications of Remote Sensing: Results from Two NASA Projects", Spring 2000.

Scholarships and Awards Committee, AY 1999-2000, 2010-2011.

Colloquium presentation (with others associated with CESAR): What's Up in the Way of Geographic Technologies at the Center for Earth Systems Analysis Research (CESAR)?," October 1992.

Geojaunt (informal bag lunch slide presentation), "What do Egypt and Thailand have in Common?," May, 1990.

Geojaunt , "What Do South Africa and Spain Have in Common?," April, 1990.

Ad Hoc Committee on Joint Doctoral Program, Spring 1988 1990; member; assisted in generation of proposal, curriculum and catalog copy, and have attended meetings in San Diego and Santa Barbara for proposed program with U.C.-Santa Barbara.

Ad Hoc Committee on Journals, Fall 1989; member; update University library holdings.

Budget Committee, Fall 1983 - Spring 1990; member; chair Fall 1985 - Spring 1986, Fall 1989 - Spring 1990.

Internal Operations Committee, Fall 1983- Spring 1985, Fall 1990; chair Fall 1984 - Spring 1985, Fall 1998 to 2000.

Service to the Community:

Articles in Newspapers

Article in San Diego Union Tribune Quest section on NASA project pertaining to habitat monitoring in San Diego County, November, 2001.

Supplied information and graphics for Maps, Bytes and the Revolution in Geography, College of Arts and Letters Alumni Newsletter, Fall 2000.

Supplied information for article on commercial satellites in San Diego Union Tribune, Fall 1999.

Supplied information and graphics for Satellite, Computers New Tools of Discovery for SDSU Geographers, CSU Stateline, April 1989.

Supplied information and graphics for Remapping an Ancient Science: The New Face of Geography, SDSU Alumni Newsletter.

XTRA News Radio Interview on remote sensing and GIS technology and related research projects at SDSU, 1987.

Supplied information/interview for Daily Aztec Articles on Geography Program/weather station.

Supplied information/interview for Daily Aztec Articles on Geography Program/weather station.

Television

Interviewed on CW6 Channel 6 TV, Televisa Tijuana Channel 12 and San Diego Union-Tribune – UAV imaging for post-disaster assessment 2/2015

Interviewed on KFMB Channel 8 TV News – San Diego wildfires 10/2008

Interviewed on KUSI Channel 51 News - CESAR Laboratory, 6/2002 and 11/2005

Interviewed on Fox Channel 6 News - Launch of IKONOS commercial satellite, 12/1999.

Other Services to Community

Presenter, Geography Awareness Week Presentations on GIScience Applications: Patrick Henry H.S. November 2011 - 2015; Hoover H.S. November 2010, Francis Parker School November 1999, 2000, 2001.

Member, Vegetation Mapping Subcommittee, Transnet Environmental Task Force, San Diego Association of Governments, 2008 – present.

Speaker, Current Technologies and Applications, Technologies for Monitoring Habitats and Preserves, June 2006.

Speaker, Applications of Remote Sensing to Land Use Changes in San Diego County, San Diego Partners for Biodiversity, May 2003.

Speaker, Serving Imagery in Wireless and Optical Formats Via the Internet in the Context of Monitoring Habitat Reserves and Adjacent Lands presented at SDSU Technology Show and Tell, June 2002.

Speaker, San Diego Urban Regional Information Systems (URISA) Chapter, October 2000.

Speaker, San Diego Women's Environmental Council, October 2000.

Speaker, Technology Advisory Committee of the San Diego Multiple Species Conservation Program, October 2000.

Co-Chair, City of San Diego Multiple Species Conservation Program, Technical Advisory Committee, 1998 to present.

Member Selection Committee, San Diego County Imagery Consortium, July 2000 - May 2001.

City of San Diego Multiple Species Conservation Program, Habitat Tracking Committee, 1998-99.

Speaker, Forest Service Bureau of Land Management 11th Annual Meeting, San Diego, 1993.

Workshop Speaker, Workshop on the Use of Geographic Information Systems and Digital Image Processing Land Use Analysis and Facilities Planning and Monitoring, sponsored by the Center for Earth Systems Analysis Research (CESAR), Department of Geography, 1992.

Contributor, first ERDAS training video for teaching remote sensing, 1992.

Speaker, Meeting on Satellite Imaging and Remote Sensing, sponsored by URISA San Diego, 1992.

Host, California Map Society Meetings, 1991.

Workshop Speaker, Workshop on the Use of Geographic Information Systems (GIS) and Digital Image Processing (DIP) in Land Use Analysis, Planning and Monitoring, for City/County Managers and Land Use Planning Directors, sponsored by the Center for Earth Systems Analysis Research (CESAR), Department of Geography, 1991.

Speaker, Remote Sensing and Image Interpretation for Earth Observations, The Twelve-Thirty Club of La Jolla, April 1990, retired senior citizens.

Basic Concepts of Remote Sensing and Digital Image Processing and the ERDAS - ARC/INFO Live Link, Hungry Valley SVRA GIS Workshop, SDSU, June 1989; lecturer.

ERDAS and Basic Concepts of Remote Sensing/Image Processing, Cuyamaca Ranch State Park GIS Workshop, SDSU, April 1988; organizer and lecturer.

Aerial Photographic Interpretation for Resource Management, Short Course for State of California Resources Agency, Santa Barbara, March 1988; lecturer and lab designer.

Remote Sensing and Physical Geography, Geography Workshop for Secondary Educators, SDSU, August 1984.