

Robert A. Sohlberg

Department of Geographical Sciences
University of Maryland
4600 River Road, Suite 300
Riverdale, MD 20737 USA

email: sohlberg@umd.edu
+1 240.305.5519

Date of Birth: April 13, 1966 Place of Birth: Moline, Illinois, USA Citizenship: United States

Qualified as a federal Type II Wildland Firefighter, 2002.

EDUCATION

B.S. 1996 Geography with minor in Physical Science, University of Maryland, College Park, USA.
Honors Thesis: Effect of Land Cover on Coarse Resolution Bidirectional Reflectance in Boreal Canada

Graduate Study, Geography, University of Maryland, College Park, USA.

EMPLOYMENT

Jul. 2015 – present: Principal Faculty Specialist, Dept. of Geographical Sciences, University of Maryland.
Dec. 1997 – Jun. 2015: Faculty Research Assistant, Dept. of Geographical Sciences, University of Maryland.
Aug. 1996 – Dec. 1997: Graduate Research Assistant, Dept. of Geographical Sciences, University of Maryland.
Apr. 1994 – Aug. 1996: Student Research Assistant, Dept. of Geographical Sciences, University of Maryland.
July 1993 – July 1994: Self-Employed Consultant (information technology), Washington, DC.
Feb. 1988 – July 1993: Consultant and Researcher, The PresentFutures Group, Falls Church, Virginia.
April 1986 – Jan. 1988: Senior Associate, Communications Consortium Media Center, Washington, DC.

PUBLICATIONS

Book Chapters:

Carroll, M., Townshend, J., Hansen, M., DiMiceli, C., Sohlberg, R., Wurster, K. 2010. Vegetative Cover Conversion and Vegetation Continuous Fields. In Ramachandran., B., Justice, C.O., Abrams, M. (eds.) **Land Remote Sensing and Global Environmental Change: NASA's Earth Observing System and the Science of ASTER and MODIS**. Springer-Verlag, pp 725-745.

Refereed Articles:

DiMiceli, C., J. Townshend, M. Carroll, R. Sohlberg, 2021. Evolution of the representation of global vegetation by Vegetation Continuous Fields. *Remote Sensing of Environment*, Volume 254.
<https://doi.org/10.1016/j.rse.2020.112271>.

Carroll, M. M. Wootton, C. DiMiceli, R. Sohlberg and M. Kelly (2016), Quantifying surface water dynamics at 30 meter spatial resolution in the North American high northern latitudes 1991-2011, *Remote Sensing*, 8(622),
<https://doi.org/10.3390/rs8080622>.

Carroll, M.L., C.M. DiMiceli, J.R.G. Townshend, R.A. Sohlberg, A.I. Elders, S. Devadiga, A.M. Sayer and R.C. Levy (2016), Development of an operational land water mask for MODIS Collection 6 and influence on downstream data products, *International Journal of Digital Earth*. Vol. 10(2), 207-218.

Mandl, D., S. Frye, P. Cappelaere, M. Handy, F. Policelli, M. Katjizeu, G. Van Langenhove, G. Aube, J.F. Saulnier, R. Sohlberg, J. Silva, N. Kussel, S. Skakun, S. Ungar, R. Grossman, J. Szarzynski (2013), Use of Earth Observing One (EO-1) satellite for the Namibia sensorweb flood early warning pilot, *IEEE Journal of Selected Topics in Applied Earth Observations and Remote Sensing*, 6(2), pp 298-308.

DiMiceli, C., Sohlberg, R. Carroll, M., Vermote, E. (2012), A Coarse Resolution Multisensor Time Series of Deforestation in the Amazon Basin, *International Journal of Remote Sensing*, submitted.

Carroll, M. L., J. R. G. Townshend, C. M. DiMiceli, T. Loboda, and R. A. Sohlberg (2011), Shrinking lakes of the Arctic: Spatial relationships and trajectory of change, *Geophysical Research Letters*, 38, L20406, doi:10.1029/2011GL049427.

Carroll, M., Townshend, J., DiMiceli, C., Noojipady, P., Sohlberg, R. 2009. A new global raster water mask at 250m resolution. *International Journal of Digital Earth*. 2 (4), 291-308.

Hansen, M.C., DeFries, R.S., Townshend, J.R.G., Carroll, M., DiMiceli, C., and Sohlberg, R. 2003. Global percent tree cover at a spatial resolution of 500 meters: first results of the MODIS Vegetation Continuous Fields algorithm, *Earth Interactions*, 7, 1-15.

Zhan, X., Sohlberg, R., Townshend, J.R.G., DiMiceli, C., Carroll, M., Eastman, J.C., Hansen, M., and DeFries, R.S. 2002. Detection of land cover changes using MODIS 250m data, *Remote Sensing Environment*, 83(1&2), 336-350.

Hansen, M.C., DeFries, R.S., Townshend, J.R.G., Sohlberg, R., DiMiceli, C., and Carroll, M. 2002. Towards an operational MODIS continuous field of percent tree cover algorithm: Examples using AVHRR and MODIS data, *Remote Sensing Environment*, 83(1&2), 303-319.

Hansen, M.C., DeFries, R.S., Townshend, J.R.G., Marufu, L., and Sohlberg, R. 2002. Development of a MODIS tree cover validation data set for Western Province, Zambia, *Remote Sensing Environment*, 83(1&2), 320-335.

Hansen, M.C., DeFries, R.S., Townshend, J.R.G., and Sohlberg, R. 2000. Global land cover classification at 1km spatial resolution using a classification tree approach, *International Journal of Remote Sensing*, 21(6&7), 1331-1364.

Zhan, X., DeFries, R., Townshend J.R.G., DiMiceli, C., Hansen, M., Huang, C., and Sohlberg, R. 2000. The 250m global land cover change product from the Moderate Resolution Imaging Spectroradiometer of NASA's Earth Observing System, *International Journal of Remote Sensing*, 21(6&7), 1433-1460.

DeFries, R.S., Hansen, M., Townshend, J.R.G., and Sohlberg, R. 1998. Global land cover classifications at 8 km spatial resolution: The use of training data derived from Landsat imagery in decision tree classifiers, *International Journal of Remote Sensing*, 19(16), 3141-3168.

DeFries, R., Hansen, M., Steininger, M., Dubayah, R., Sohlberg, R., and Townshend, J. 1997. Subpixel forest cover in central Africa from multisensor, multitemporal data, *Remote Sensing Environment*, 60(3), 228-246.

Conference Proceedings and Published Reports:

Soja, A., D. Schimel, L. Giglio, T. Loboda, N. French, J. Dibb, T. Moore, J. McCarty, A. da Silva, S. Conard, J. Douglas, R. Kahn, R. Sohlberg, A. Pankratz, R. Swap, C. Ichoku, D. Hamilton, V. Ambrosia, C. Rodriguez-Franco, B. Stocks, Z. Holden, M. Carroll, K. Weber, T. Harbour, J. Schnase, E. Hinkley, M. Miller, M. Rollins, S. Goodrick, A. Watts, S. Goetz, B. Peterson, R. Ziebart, B. Barnard, J. Coen, J. Cissel, T. Brown, C. Wiedinmyer, C. Justice, J. Vogelmann, J. Brass, J. Randerson, B. Quayle, B. Schichtel, S. Hook, S. Phillips, D. Roy, Prudent observations necessary to address wildland fire science and applications grand challenges: Critical feedbacks to and from the climate system. 2015. Submitted to the Space Studies Board in response to a RFI regarding the **2017-2027 NRC Decadal Survey in Earth Science and Applications from Space**.

Mandl, D., R. Sohlberg, C. Justice, S. Ungar, T. Ames, S. Frye, S. Chien, P. Cappelare, D. Tran, L. Derezinski, and G. Paules, A Space-Based SensorWeb for Disaster Management. 2008. **IGARSS: IEEE International Geoscience and Remote Sensing Symposium Proceedings**, Boston, MA.

Mandl, D., R. Sohlberg, C. Justice, S. Ungar, T. Ames, S. Frye, S. Chien, P. Cappelare, D. Tran, and G. Paules. 2007. Experiments with User-Centric GEOSS Architectures. **IGARSS: IEEE International Geoscience and Remote Sensing Symposium Proceedings**, Barcelona, Spain.

Quayle, B., Descloitres, J., and Sohlberg, R. 2004 (invited). Operational remote sensing technologies in support of interagency wildfire management. **IGARSS: IEEE International Geoscience and Remote Sensing Symposium Proceedings**, Anchorage.

Bobbe, T. M. Finco, B. Quayle, K. Lannom, R. Sohlberg, A. Parsons. 2003. Field Measurements for the Training and Validation of Burn Severity Maps from Spaceborne, Remotely Sensed Imagery, **Joint Fire Science Program**.

Descloitres, J., Sohlberg, R., Owens, J., Giglio, L., Justice, C., Carroll, M., Seaton, J., Crisologo, M., Finco, M., Lannom, K., and Bobbe, T. 2002. The MODIS Land Rapid Response Project. **IGARSS: IEEE International Geoscience and Remote Sensing Symposium Proceedings**, Toronto.

Quayle, B., Finco, M., Kostyuchenko, D., Lannom, K., Norton, J., Carroll, M., Descloitres, J., and Sohlberg, R., 2002. USDA Forest Service MODIS active fire mapping and delivery. **Rapid Delivery of Remote Sensing Products: Proceedings of the Ninth Forest Service Remote Sensing Applications Conference**, San Diego. American Society for Photogrammetry and Remote Sensing: Bethesda, MD.

Carroll, M., Descloitres, J., Giglio, L., Sohlberg, R., Finco, M., Quayle, B., Owens, J., Townshend, J., and Justice, C. 2002. MODIS Land Rapid Response activities with the USDA Forest Service: time sensitive data acquisition to support wildfire management. **Proceedings of 2002 NASA Science Data Processing Workshop**, Greenbelt, MD.

Sohlberg, R., Descloitres, J., and Bobbe, T., 2001. MODIS Land Rapid Response: Operational Use of Terra Data for USFS Wildfire Management. *The Earth Observer*, 13(5), 8-10,14.

Townshend, J.R.G., DeFries, R.S., Zhan, X., Sohlberg, R.A., Hansen, M.C., DiMiceli, C., Carroll, M.L., and Eastman, J.C. 2001. MODIS 250m and 500m time series data for change detection and continuous representation of vegetation characteristics. **Multitemp 2001**, Trento, Italy.

Justice, C., Townshend, J., Vermote, E., Sohlberg, R., Descloitres, J., Roy, D., Hall, D., Salomonson, V., Riggs, G., Huete, A., Didan, K., Miura, T., Wan, Z., Strahler, A., Schaaf, C., Myneni, R., Running, S., Glassy, J., Nemani, R., El Saleous, N., and Wolfe, R. 2000. Preliminary land surface products from the NASA Moderate Resolution Imaging Spectroradiometer (MODIS). **IGARSS: IEEE International Geoscience and Remote Sensing Symposium Proceedings**, Honolulu.

Huang, C., Townshend, J.R.G., Zhan, X., Hansen, M., DeFries, R., and Sohlberg, R. 2000. Detecting land cover changes based on their trajectories in the spectral space. **IGARSS: IEEE International Geoscience and Remote Sensing Symposium Proceedings**, Honolulu.

Zhan, X., Hansen, M., DeFries, R., Townshend, J.R.G., Huang, C., DiMiceli, C., and Sohlberg, R. 1999. **MODIS Enhanced Land Cover and Land Cover Change Product**, Algorithm Theoretical Basis Documents (ATBD) Version 2.0, EOS Project Science Office, NASA Goddard Space Flight Center, Greenbelt, Maryland. 94 pp.

Hansen, M., DeFries, R., DiMiceli, C., Huang, C., Sohlberg, R., Zhan, X., and Townshend, J.R.G. 1998. Red and infrared space partitioning for detecting land cover change, **IGARSS: IEEE International Geoscience and Remote Sensing Symposium Proceedings**, Seattle, 2512-2514.

Zhan, X., Huang, C., Townshend, J.R.G., DeFries, R., Hansen, M., DiMiceli, C., Sohlberg, R., Hewson-Scardelletti, J., and Tompkins, A. 1998. Land cover change detection with change vector in the red and near-infrared reflectance space, **IGARSS: IEEE International Geoscience and Remote Sensing Symposium Proceedings**, Seattle, 859-861.

Huang, C., Townshend, J.R.G., Zhan, X., Hansen, M., DeFries, R., and Sohlberg, R. 1998. Developing the spectral trajectories of major land cover change processes, **Proceedings of SPIE, Hyperspectral Remote Sensing and Applications**, Beijing, 155-162.

PRESENTATIONS

Mandl, D., R. Sohlberg, E. Hinkley. (invited) Overview of SensorWeb Technology for State of Oklahoma Fire Marshalls. Innovative Technology Partnerships Office, Goddard Space Flight Center, October 7, 2015.

Campbell, P., P. Townsend, D. Mandl, C. Kingdon, V. Ly, R. Sohlberg, L. Corp, L. Ong, P. Cappelaere, S. Frye, M. Handy, J. Nagol, V. Ambrosia, F. Navarro, Next generation UAS based spectral systems for environmental monitoring, Earth Science Technology Forum, June 23-25, 2015, Pasadena.

Sohlberg, R. Advances in Wildfire Remote Sensing-Report back from TFRSAC (invited), HypsIRI Symposium, June 3-5, 2015, Greenbelt.

Campbell, P., P. Townsend, D. Mandl, C. Kingdon, V. Ly, R. Sohlberg, L. Corp, L. Ong, P. Cappelaere, S. Frye, M. Handy, J. Nagol, V. Ambrosia, F. Navarro, Next generation UAS based spectral systems for environmental monitoring, HypsIRI Symposium, June 3-5, 2015, Greenbelt.

Sohlberg, R., C. DiMiceli, M. Carroll, D-H. Kim, M. Kelly, J. Townshend, Vegetation Continuous Fields: The Evolution of Sub-Pixel Land Cover Mapping from AVHRR, MODIS and Landsat, AGU/CGU Joint Assembly, May 3-7, 2015, Montréal.

Campbell, P., D. Mandl, P. Townsend, C. Kingdon, V. Ly, R. Sohlberg, L. Corp, L. Ong, P. Cappelaere, J. Nagol, V. Ambrosia, F. Navarro, Next Generation UAS Based Spectral Systems for Environmental Monitoring. Carbon Cycle and Ecosystem Meeting, April 20-23, 2015, College Park, MD.

Carroll, M., M. Wooten, C. DiMiceli, R. Sohlberg, J. Townshend. ABoVE water maps: 30m spatial resolution maps of water at decadal time step from 1990 – 2011. 2015. Carbon Cycle and Ecosystem Meeting, April 20-23, 2015, College Park, MD.

Kim, D.-H., C. DiMiceli, R. Sohlberg, M. Hansen, M. Carroll, M. Kelly, J. Townshend, 2014, Tracking trends in fractional forest cover change using long term data from AVHRR and MODIS, Fall AGU, San Francisco.

Mandl, D., S. Frye, F. Policelli, P. Cappelaere, M. Handy, R. Sohlberg, R. Grossman, 2013. From Big Data to Small Transportable Products for Decision Support for Floods in Namibia, Fall AGU, San Francisco.

Sohlberg, R., D. Mandl, P. Cappelaere, S. Frye, V. Ly, M. Handy, and J. Rice, (invited), Web Coverage Process Service Science Applications Using FLAASH Reflectance Data: Toward Calibrated Time Series in Near Real-Time with the IPM, at the 2011 HypsIRI Science Workshop, August 23-25, 2011, Washington, DC.

Sohlberg, R., D. Mandl, P. Cappelaere, S. Frye, V. Ly, M. Handy, and J. Rice, (invited), Use of HypsIRI Data with SensorWeb WCPS for Environmental Monitoring – Pre-Launch Demonstrations Using Hyperion, at the 2011 HypsIRI Symposium, May 17-18, 2011, NASA Goddard Space Flight Center, Greenbelt, MD.

Sohlberg, R., Mandl, D., Frye, S., Cappelaere, P., and Ambrosia, V., (invited), EO-1 in Support of Rapid Fire Assessment, at the EO-1 10th Anniversary Symposium on November 30, 2010 in Greenbelt, MD.

Mandl, D., Sohlberg, R., Cappelaere, P., and Frye, S. "SensorWeb 3G: Extending On-Orbit Sensor Capabilities to Enable Near Realtime User Configurability" at the Earth Science Technology Office (ESTO) Science and Technology Forum (ESTF) on June 23, 2010 in Crystal City, VA.

Sohlberg, R., E. Hinkley, V. Ambrosia, J. Clark, and I. Csiszar, (invited), Use of VIS/NIR/SWIR/TIR Remote Sensing for U.S. Wildland Fire Characterization and Management: Potential for HypsIRI, at the 2nd HypsIRI NASA Decadal Survey Mission Science Workshop, August 11-13, 2009, Pasadena, CA.

Mandl, D., R. Sohlberg, C. Justice, S. Ungar, T. Ames, S. Frye, S. Chien, P. Cappelaere, D. Tran, L. Derezinski, and G. Paules, "SensorWeb 2.0, Connecting Earth's Sensors via the Internet," ESTC 2008, June 23-25, 2008. College Park, MD.

Sohlberg, R. and D. Mandl, "Integrating Orbital and Airborne Assets: SensorWeb Demonstrations During Western States Fire Mission 2007 TFRSAC and RS 2008 Meetings, Salt Lake City, UT, April 14-17, 2008.

Mandl, D., R. Sohlberg, C. Justice, S. Ungar, T. Ames, S. Frye, S. Chien, D. Tran, P. Cappelaere, L. Derezinski, and G. Paules, "SensorWebs with a Service-Oriented Architecture for On-demand Science Products," SPIE 2007, August 26-30, San Diego, CA.

Mandl, D., Rob Sohlberg, Stu Frye, Pat Cappelaere, Steve Ungar, Steve Chen, and Danny Tran, "An Updated Status of the Experiments with SensorWebs and OGC Service Oriented Architectures to Enable Global Earth Observing Systems of Systems," GSAW 2007, March 27-29, 2007, Manhattan Beach, CA.

Mandl, D., Sohlberg, R., Justice, C., Frye, S., Chien, S., Ames, T., and Ungar, S. 2006. A service oriented architecture to enable sensor webs. **American Geophysical Union Fall Meeting**, San Francisco.

Mandl, D., Frye, S. Chien, S., Ungar, S., Sohlberg, R., Ames, T. 2006. Transforming space missions into service oriented architectures. **Global Grid Forum 18**, Washington.

Sohlberg, R., Carroll, M., Townshend, J., and McCarty, J. 2005. Use of polar orbiting observatories to create a synoptic inventory of North American forest areas affected by wildfire. **American Geophysical Union Fall Meeting**, San Francisco.

Townshend, J., Hansen, M., Sohlberg, R., DeFries, R., and Schleevesi, K. 2005. Towards a community protocol for validating global climate records representing sub-pixel land cover components and changes through time using AVHRR, MODIS and VIIRS. **American Geophysical Union Fall Meeting**, San Francisco.

Schmaltz, J., Descloitres, J., Giglio, L., Justice, C., Sohlberg, R., Davies, D., Anyamba, A., Hansen, M., Pinhero, A., Seaton, J., and Kumar, S. 2005. MODIS Rapid Response Project products for near-real-time applications. **American Society for Photogrammetry & Remote Sensing Annual Conference**, Baltimore.

Mandl, D., Caffrey, R., Frye, S., Grosvenor, S., Hess, M., Chien, S., Sherwood, R., Davies, A., Hayden, S., Sweet, A., and Sohlberg, R. 2004. An architecture to enable future sensor webs. **SpaceOps 2004**. Montreal.

Hansen, M., Townshend, J., Carroll, M., DiMiceli, C., and Sohlberg, R. 2004. Mapping land cover change in South America using MODIS data from 2000-2004. **American Geophysical Union Fall Meeting**, San Francisco.

Sohlberg, R., Descloitres, J., Frye, S., Giglio, L., Jones, J., Justice, C., Mandl, D., and McCarty, J. 2004 (invited). Use of MODIS for active fire detection and with EO-1 for SensorWeb applications. **RS2004: Tenth Biennial Forest Service Remote Sensing Applications Conference**, Salt Lake City.

Descloitres, J., Justice, C., Sohlberg, R., Giglio, L., Schmaltz, J., Seaton, J., Davies, D., Anyamba, A., Hansen, M., Carroll, M., and Sullivan, M., 2003. The MODIS Rapid Response Project: Near-Real-Time Processing for Fire Monitoring and Other Applications. **American Geophysical Union Fall Meeting**, San Francisco.

Hansen, M.C., DeFries, R.S., Townshend, J.R., and Sohlberg, R.A., 2003. Using Vegetation Continuous Fields to Monitor Change in Forest Cover. **American Geophysical Union Fall Meeting**, San Francisco.

Sohlberg, R., 2003 (invited). Use of NASA Earth Observing System data to monitor active fires and to develop sensorweb decision support systems. **Second International Wildland Fire Ecology and Fire Management Congress and Fifth Symposium on Fire and Forest Meteorology**, Orlando.

Finco, M., Quayle, B., Sohlberg, R., and Descloitres, J., 2003. Satellite to the public in near real-time: providing active wildfire information with MODIS Rapid Response. **Interface 2003: Security and Infrastructure Protection**, Salt Lake City.

Townshend, J.R.G., Sohlberg, R.A., DeFries, R.S., Hansen, M.C., Carroll, M.L., DiMiceli, C., and Semeiks, B.M. 2002. The MODIS vegetative cover and change products: validation and analysis. **American Geophysical Union Fall Meeting**, San Francisco.

Bobbe, T., Descloitres, J., Finco, M., Giglio, L., Justice, C., Sohlberg, R., and Townshend, J. 2002. MODIS Land Rapid Response System: implementation with USDA Forest Service and implications for active fire detection and land cover change products from future moderate resolution sensors. **NPOESS MAXI Review 2002**, Silver Spring, MD.

Eastman, J., Townshend, J., Justice, C., and Sohlberg, R. 2002. Roadless areas and forest fires in the western United States. **American Geophysical Union Spring Meeting**, Washington, DC.

Hao, W., Kaufman, Y., Descloitres, J., Justice, C., Sohlberg, R., and Bobbe, T. 2002 (invited). Using a MODIS direct broadcast system to monitor fires and smoke and forecast air quality. **American Geophysical Union Spring Meeting**, Washington, DC.

Hansen, M., DeFries, R.S., Townshend, J.R.G., and Sohlberg, R. 2002 (invited). Continuous fields of tree cover for the United States using multi-resolution satellite Data. **RS2002: Ninth Biennial Forest Service Remote Sensing Applications Conference**, San Diego.

Finco, M., Sohlberg, R., Descloitres, J., and Giglio, L. 2002. The MODIS Land Rapid Response project. **RS2002: Ninth Biennial Forest Service Remote Sensing Applications Conference**, San Diego.

Hansen, M.C., DeFries, R.S., Townshend, J.R.G., Sohlberg, R., Carroll, M., and DiMiceli, C. 2002. Global percent tree cover from MODIS data. **American Geophysical Union Spring Meeting**, Washington, DC.

Descloitres, J., Giglio, L., Sohlberg, R., Owens, J., Justice, C., Townshend, J., Seaton, J., Crisologo, M., Carroll, M., and Finco, M. 2001. The MODIS Land Rapid Response project: a comprehensive suite of products to support U.S.D.A. Forest Service fire management. **American Geophysical Union Fall Meeting**, San Francisco.

Townshend, J.R.G., Sohlberg, R.A., Hansen, M.C., DeFries, R.S. 2001. MODIS vegetation Cover Products for Estimating Tree Cover and Monitoring Change. **American Geophysical Union Fall Meeting**, San Francisco.

Townshend, J.R.G., DeFries, R.S., Zhan, X., Sohlberg, R.A., DiMiceli, C., Carroll, M.L., Hansen, M.C., and Eastman, J.C. 2001. A global alarm product for land cover change: MODIS 250 meter Vegetative Cover Conversion algorithm. **IGBP Open Science Conference**, Amsterdam.

Hansen, M.C., DeFries, R.S., Townshend, J.R.G., and Sohlberg, R.A. 2001. Using continuous fields of tree cover maps from satellite data to assess degradation within ecoregions, an example from South America. **IGBP Open Science Conference**, Amsterdam.

Sohlberg, R., Zhan, X., DiMiceli, C., Carroll, M., Townshend, J., Eastman, J., Hansen, M., and DeFries, R. 2001. Change detection for flood and burning events using MODIS 250m data and the Vegetative Cover Conversion algorithm. **American Geophysical Union Spring Meeting**, Boston.

Hansen, M.C., DeFries, R.S., Townshend, J.R.G., and Sohlberg, R.A. 2001. Using continuous fields of tree cover to assess degradation within ecoregions: An example from South America. **American Geophysical Union Spring Meeting**, Boston.

Townshend, J., Hansen, M., DeFries, R., Sohlberg, R., Desch, A., and White, B. 2001. Monitoring the extent of forests on national to global scales. **American Geophysical Union Spring Meeting**, Boston.

Zhan, X., Sohlberg, R., Townshend, J.R.G., DeFries, R.S., Dimiceli, C., and Hansen, M.C. 2000. Vegetative Cover Conversion product from MODIS 250m data: Early results. **American Geophysical Union Fall Meeting**, San Francisco.

Watson, R.P., Sohlberg, R., Brumby, S.P., and Szymanski, J.J. 2000. Mapping wildfire burn extent and intensity across multi-scale imagery of the Cerro Grande Fire, Los Alamos, New Mexico. **American Geophysical Union Fall Meeting**, San Francisco.

Hansen, M.C., DeFries, R.S., Zhan, X., Sohlberg, R., and Townshend, J.R.G. 2000. Continuous Fields of Vegetation from MODIS data. **American Geophysical Union Fall Meeting**, San Francisco.

Sohlberg, R., Kalluri, S.N.V., DiMiceli, C.M., Vermote, E.F., El Saleous, N.Z., Justice, C.O., and Townshend, J.R.G. 2000. Comparative advantages of MODIS 250m data for earth science applications. **American Geophysical Union Spring Meeting**, Washington, DC.

DeFries, R., Sohlberg, R., and Steininger, M. 1995. Estimation of African percent forest cover using multi-sensor, multi-resolution data and channel metrics. **American Geophysical Union Spring Meeting**, Baltimore.

RESEARCH GRANTS

- 2023 **Wildland Fire Applications Transition Support**, NASA Applied Sciences Wildland Fire Program, \$150K (Principal Investigator).
- 2021 **Terra 2020 Senior Review and the Mission Extension for the Earth Science Operating Missions -- Vegetation Continuous Fields**, NASA EOS Program, \$325K (Co-Investigator).
- 2018 **Modeling Edge Influence on Forest Structure**, NASA SLSCVC Program, \$823K (Co-Investigator).
- 2015 **Next Generation UAS Based Spectral Systems for Environmental Monitoring**, NASA AIST Program, \$1.06M, (Principal Investigator on sub-award from UMBC; Co-Investigator on primary grant to UMBC).
- 2014 **MODIS Vegetation Continuous Fields - Collection 6 Refinements**, NASA, EOS Program, \$578K (Co-Investigator).
- 2014 **Determining the Extent and Dynamics of Surface Water for the ABoVE Campaign**, NASA, TEP, \$82K (Co-Investigator).
- 2013 **Vegetation Continuous Fields ESDR for the AVHRR and MODIS Records: 1981 – Present**, NASA, MEaSURES Program, \$2.25M, Co-Investigator).
- 2012 **A High Performance, Onboard Multicore Intelligent Payload Module for Orbital and Suborbital Remote Sensing Missions**, NASA, AIST Program, \$919K, (Principal Investigator on sub-award from GSFC; Co-Investigator on primary grant to GSFC).
- 2011 **Enhanced Land Cover Products from MODIS: Vegetation Continuous Fields Maintenance and Refinements**, NASA, EOS Program, \$662K (Co-Investigator).
- 2009 **SensorWeb 3G to Provide Cost-Effective Customized Data Products for Decadal Missions**, NASA, AIST Program, \$1.5M (Principal Investigator on sub-award from GSFC; Co-Investigator on primary grant to GSFC).
- 2007 **Enhanced Land Cover and Land Cover Change Products from MODIS**, NASA, EOS Program, \$756K (Co-Investigator).
- 2006 **An Interoperable Sensor Architecture to Facilitate SensorWebs in Pursuit of GEOSS**, NASA, AIST Program, \$1.5M (Principal Investigator on sub-award from GSFC; Co-Investigator on primary grant to GSFC).
- 2003 **Enhanced Land Cover and Land Cover Change Products from MODIS**, NASA, EOS Program, \$1.19M (Co-Investigator).
- 2003 **Global Land Cover Facility**, NASA, REASoN Program, \$1.65M (Co-Investigator).
- 2002 **Rapid Response with the USDA Forest Service – Use of NASA EOS Data to Improve Federal Response to Wildfire**, NASA, Solid Earth and Natural Hazards Program, \$721K (Lead Co-Principal Investigator).

- 2002 **Field Measurements for the Training and Validation of Burn Severity Maps from Spaceborne, Remotely Sensed Imagery**, NIFC, Joint Fire Science Program, \$98K (Co-Investigator).
- 2002 **Rapid Response Pathfinder for Natural Hazards**, NASA, Synergy II Program, \$300K (Lead Co-Principal Investigator).
- 2001 **Support to USDA Forest Service for MODIS Rapid Response**, USFS, \$120K (Lead Co-Principal Investigator).

TEACHING

Instructor, GEOG170, Maps and Map Use: Spring 2008, 2009, 2010; Summer II 2010; Spring 2011.

Instructor, GEOG170, Introduction to Methods of Geospatial Intelligence and Analysis: Summer I 2011; Fall 2012; Winter 2013.

AWARDS

Honorable Mention, Software of the Year Award for GSFC's SensorWeb Toolbox, NASA, 2011.

Ames Honor Award for Wildfire Research & Applications Partnership, NASA, 2009.

R&D 100 award (100 most technologically significant products of the year) for SensorWeb 2.0, 2008.

Letter of recognition for Cyclone Nargis flood mapping in Burma, Central Intelligence Agency, 2008.

Software Release Award, Technology Commercialization Office, NASA Goddard Space Flight Center, 2002.

SERVICE

Member, ABoVE Science Team (Formulation Phase), 2014-present.

Associate Member, MODIS Science Team, 2005-present.

Member, NASA-USFS Tactical Fire Remote Sensing Advisory Committee, 2004-present.

Faculty Specialist Chair, Department of Geographical Sciences, University of Maryland, 2014-2016.

Research Committee, Department of Geography, University of Maryland, 2003-2005.

Facilities Committee, Department of Geography, University of Maryland, 1995-2003.

Deputy Team Leader, NASA Wildfire Response Team, 2002-2004.

Reviewer for International Journal of Wildland Fire.

Reviewer for International Journal of Remote Sensing.

Reviewer for Journal of Geophysical Research.

Reviewer for Remote Sensing of Environment.

Proposal reviewer for NASA Terrestrial Ecology Program.

Proposal reviewer for NASA Natural Hazards Program.

Proposal reviewer for NASA New Investigator Program.

Panel reviewer for NASA Interdisciplinary Science Program.

Proposal reviewer for NASA Carbon Cycle Science and Related Opportunities in Biology and Biogeochemistry of Ecosystems and Applications.

Panel reviewer for NASA Applications Division Wildland Fire Program.