

TATIANA V. LOBODA

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Department of Geographical Sciences
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APPOINTMENTS

Aug 2019 – present	Professor, Department of Geographical Sciences, University of Maryland, College Park, MD, USA
Aug 2014 – July 2019	Associate Professor, Department of Geographical Sciences, University of Maryland, College Park, MD, USA
Aug 2010 – July 2014	Assistant Professor, Geography Department, University of Maryland, College Park, MD, USA
Aug 2008 – July 2010	Research Assistant Professor, University of Maryland, College Park, MD, USA
May 2004 – July 2008	Faculty Research Assistant, University of Maryland, College Park, MD, USA
Aug 2002–May 2004	Graduate Research Assistant, University of Maryland, College Park, MD, USA
Aug 1995–Sept 2000	Senior Instructor of English, English Grammar & Phonetics, Moscow Pedagogical State University, Moscow, Russia
Sept 1997–June 1998	Senior Instructor of English, General and Business, International Education Center Ministry of Foreign Affairs

EDUCATION

Degrees

2004 – 2008	Ph.D. Geography, University of Maryland, College Park, MD, USA
2002 – 2004	M.A. Geography, University of Maryland, College Park, MD, USA
1990 – 1995	B.A. Geography and English Language, Moscow State Pedagogical University, Moscow, Russia

Theses and Dissertations

May 2008	Impact of Climate Change on Wildland Fire Threat to the Amur Tiger and Its Habitat Advisor: Prof. C.O. Justice
April 2004	Estimating Potential Fire Danger within the Siberian Tiger Habitat (scholarly paper in fulfillment of MA degree requirements). Advisor: Prof. C.O. Justice.

RESEARCH INTERESTS

Methods and techniques for satellite mapping of land cover and disturbances

Multi-scale impacts of socio-economic and environmental factors on wildland fire occurrence and its characteristics

Impact of climate change on arctic ecosystems: implications for the indigenous people and area's biodiversity

Environmental impacts on human health

Disease risk modeling

LANGUAGES

Fluent in English and Russian

SUCCESSFUL GRANTS

- 2019 – 2022 PI for the NASA Arctic Boreal Vulnerability Experiment project “Assessing impact of climate-driven increase in wildfire emissions on air quality and health of urban and indigenous populations in Alaska”. (\$322,617)
- 2018 – 2021 PI for the NASA GEO: Group on Earth Observations Work Programme project “Myanmar Malaria Early Warning System (MMEWS): Multi-sensor satellite data fusion system for monitoring environmental predictors of malaria in the region of emerging artemisinin resistance” (\$597,964)
- 2017 – 2020 Co-I/Institutional Co-PI for the Bill and Melinda Gates Foundation project “Evidence to Action for Malaria Elimination in Myanmar”. PI – Nyunt (Duke Global Health Institute, Duke University) (\$362,299 to UMD)
- 2017 – 2021 PI for the Project 3/Institutional PI for the “Satellite and geospatial dynamic modeling of malaria risk” for the NIH’s “Myanmar Regional Center of Excellence for Malaria Research”. PIs Plowe and Nyunt (Institute for Global Health, UMB) (\$1,625,328 to UMD)
- 2017 – 2020 PI for the NASA Land Cover Land Use Change project “Understanding the role of land cover / land use nexus in malaria transmission under changing socio-economic climate in Myanmar” (\$752,679)
- 2016 – 2018 PI for the NASA Arctic Boreal Vulnerability Experiment project “Quantifying long-term impacts of single and repeated wildfire burning in North American tundra on organic soil carbon stocks and ecosystem functioning” (\$712,973)
- 2015 - 2016 Institutional PI for the Bill and Melinda Gates Foundation project “Evidence and action for malaria elimination in Myanmar”. PI – Plowe (Center for Vaccine Development, UMB) (\$109,750 to UMD)
- 2015 - 2015 PI for the State of Maryland MPOWER project “Piloting collaboration between the UMCP Center for Geospatial Information Science and the UMB Schools of Medicine, Nursing and Pharmacy, an MPowering Maryland Pilot Initiative” (\$175,000)

Tatiana V. Loboda: Curriculum Vitae

- 2013 – 2016 PI for the NASA Terrestrial Ecology project “Long-term multi-sensor record of fire disturbances in High Northern Latitudes” (\$586,336)
- 2012 – 2015 PI for the NASA Land Cover Land Use Change New Investigator project “Social drivers of land cover change around African transboundary Peace Parks” (\$299,780)
- 2012 – 2015 Co-I for the NASA Carbon Monitoring Project “The forest disturbance carbon tracking system – ACMS pilot project”. PI - Kasischke (UMD) (\$284,478)
- 2012 – 2014 PI for the USDA-Agricultural Research Service cooperative agreement “Assessing Agricultural Burning and Black Carbon Emissions in Russia Using Remote Sensing Approaches” (\$116,687)
- 2012 - 2013 PI for the Dean’s Research Initiative grant “Assessing impacts of land use change on obesity, physical activity, and health disparities in Maryland” (\$28,000)
- 2012 – 2015 Co-I/Institutional PI for NASA project “LCLUC Synthesis: Forested land cover and land use change in the Far East of the Northern Eurasia under the combined drivers of climate and socio-economic transformation”. PI – Bergen (UMich) (\$299,964 to UMD)
- 2011 – 2013 Co-I/Institutional PI for NASA project “Synthesis of forest growth, response to wildfires and carbon storage for Russian forests”. PI – Shugart (UVA) (\$197,864 to UMD)
- 2010 – 2013 Co-PI/Institutional PI for NASA project “Impacts and Implications of Increased Fire in Tundra Regions of North America”. PI – French (MTRI) (\$218,316 to UMD)
- 2009 – 2011 Co-I/Institutional PI for NIH stimulus funds project "Respiratory health impacts of wildlife particulate emissions under climate change scenarios". PI – French (MTRI) (\$218,316 to UMD)
- 2007 – 2009 Co-I for NASA Interdisciplinary Science Grant: “Evaluation of habitat availability for large carnivores under a changing climate and disturbance regime: the Amur tiger and Amur leopard case study”. PI – Shugart (UVA) (\$322,437 to UMD)
- 2004 – 2007 PI for NASA Earth System Science Fellowship: “Impacts of Climate and Land Use Change on Wildland Fire Frequency and the Amur Tiger”. (\$72,000)

PUBLICATIONS

Refereed Papers

In review

- Chen, D., Shevade, V., Baer, A., Loboda, T.V. (in review). Missing burns in the high northern latitudes: The case for regionally focused burned area products. Submitted to **Remote Sensing of Environment**
- Chen, D., Loboda, T.V., Silva, J.A., & Tonellato, M.R. (in review). Characterizing small-town development and economic change using Very High Resolution Imagery within remote rural settings of Mozambique. Submitted to **Remote Sensing**
- Chen, D., Fu, C, Jenkins, L.K., He, J., Jandt, R.R., Baer, A., Loboda, T.V. (in review). Widespread shrub-fire positive feedback loop in Arctic tundra. Submitted to **Nature Plants**

Published

- He, J., Chen, D., Jenkins, L., Loboda, T.V., 2021. Impacts of wildfire and landscape factors on organic soil properties in Arctic tussock tundra. **Environmental Research Letters**, 16 (8), 085004. <https://doi.org/10.1088/1748-9326/ac1192>
- Chen, D., Shevade, V., Baer, A., He, J., Hoffman-Hall, A., Ying, Q., Li, Y., Loboda, T.V., 2021. A Disease Control-Oriented Land Cover Land Use Map for Myanmar. **Data**, 6,63. <https://doi.org/10.3390/data6060063>.

- Pulling Kuhn, A., Cockerham, A., O'Reilly, N., Bustad, J., Miranda, V., Loboda, T.V., Black, M.M., Hager E.R., 2021. Home and neighborhood physical activity location availability among African American adolescent girls living in low-income, urban communities: associations with objectively measured physical activity. **International Journal of Environmental Research and Public Health**, 18,5003. <https://doi.org/10.3390/ijerph18095003>
- Chen, D., Fu, C., Hall, J.V., Hoy, E.E., Loboda, T.V., 2021. Spatio-temporal patterns of optimal Landsat data for burn severity index calculations: implications for high northern latitudes wildfire research. **Remote Sensing of Environment**, 258 (1): 112393, <https://doi.org/10.1016/j.rse.2021.112393>
- Wimberly, M.C., de Beurs, K.M., Loboda, T.V., Pan, W.K., 2021. Satellite observations and malaria: new opportunities for research and applications. **Trends in Parasitology**, <https://doi.org/10.1016/j.pt.2021.03.003>
- Hoffman-Hall, A., Puett, R., Silva, J.A., Chen, D., Baer, A., Han, K.T., Han, Z.Y., Thi, A., Htay, T., Thein, Z.W., Aung, P.P., Plowe, C.V., Nyunt, M.M., Loboda, T.V., 2020. Contextualizing Malaria Exposure in Myanmar by Combining Satellite-Derived Land Cover and Use Observations with Field Surveys. **GeoHealth**, 4 (2): e2020GH000299.
- He, J. and Loboda, T.V., 2020. Modeling cloud-to-ground lightning probability in Alaskan tundra through the integration of Weather Research and Forecast (WRF) model and machine learning method. **Environmental Research Letters**, 15, 115009.
- Bergen, K., Loboda, T., Newell, J., Kharuk, V., Hitztaler, S., Sun, G., Johnson, T., Hoffman-Hall, A., Ouyang, W., Park, K., Fort, C., Gargulinski, E. 2020. Long-term trends in anthropogenic land use in Siberia and the Russian Far East: a case study synthesis from Landsat. **Environmental Research Letters**, 15, 105007.
- Chen, D., Loboda, T.V., Hall, J.V., 2020. A Systematic Evaluation of Influence of Image Selection Process on Remote Sensing-based Burn Severity Indices. **ISPRS Journal of Photogrammetry and Remote Sensing**, 159: 63-77, <https://doi.org/10.1016/j.isprsjprs.2019.11.011>.
- Duncan, B.N., Abshire, J.B., Brucker, L., Carton, J.S., Comiso, J.C., Dinnat, E.P., Forbes, B.C., Gregg, W.W., Hall, D.K., Ialango, I., Jandt, R., Kahn, R.A., Kawa, S.R., Kumpula, T., Loboda, T.V., Nassar, R., Ott, L.E., Parkinson, C.L., Pulliainen, J., Rautiainen, K., Rousseaux, C.S., Soja, A.J., Tamminen, J., Tzortziou, M.A., Wang, J.S., Winker, D.M., Wu, D.L., 2019. Space-Based Observations for Understanding Changes in the Arctic-Boreal System: The Foundation for Coordinated Scientific Research and Informed Decision-Making on Human Welfare, Environmental Health, Economic Development, Adaptation, and Geostrategy. **Review of Geophysics**, 58, e2019RG000652. <https://doi.org/10.1029/2019RG000652>.
- Hoffman-Hall, A., Loboda, T.V., Hall, J.V., Carroll, M.L., Chen, D., 2019. Mapping Remote Rural Populations at 30 m Spatial Resolution Using Geospatial Data-Fusion. **Remote Sensing of Environment** 233, 111386.
- He, J., Loboda, T.V., Jenkins, L., Chen D., 2019. Mapping fractional cover of major fuel type components across Alaskan tundra. **Remote Sensing of Environment** 232, 111324.
- Shevade, V. and Loboda, T., 2019. Oil palm plantations in Peninsular Malaysia: Determinants and constraints on expansion. **PLoS ONE**, 14(2): e0210628, doi: 10.1371/journal.pone.0210628
- Goward, S., Loboda, T., Williams, D., Huang, C., 2019. Landsat Orbital Repeat Frequency and Cloud Contamination: A Case Study for Eastern United States. **Photogrammetric Engineering & Remote Sensing**, 85(2):109-118; doi: 10.14358/PERS.85.2.109
- Buma, B., Harvey, B., Gavin, D., Kelly, R., Loboda, T., McNeil, B., Marlon, J., Meddens, A., Morris, J., Raffa, K., Shuman, B., Smithwick, E., McLauchlan, K., 2018. The value of linking paleoecological and neoecological perspectives to understand spatially-explicit ecosystem resilience. **Landscape Ecology**, <https://doi.org/10.1007/s10980-018-0754-5>.

- Fan, P., Chen, J., Ouyang, Z., Groisman, P.Y., Loboda, T.V., Gutman, G., Prishchepov, A.V., Kvashnina, A., Messina, J., Moore, N., Myint, S.W. , 2018. Urbanization and sustainability under transitional economies: A synthesis for Asian Russia. **Environmental Research Letters**, 13(2018) 095007. <https://doi.org/10.1088/1748-9326/aadbf8>
- Silva, J.A., Loboda, T.V., Strong, M., 2018. Examining aspiration's imprint on the landscape: Lessons from Mozambique's Limpopo National Park. **Global Environmental Change**, **51**:43-53. DOI: 10.1016/j.gloenvcha.2018.04.013
- Hall, J. and Loboda, T., 2018. Quantifying the variability of potential black carbon transport from cropland burning in Russia driven by atmospheric blocking events. **Environmental Research Letters**, **13**, 055010.
- Carroll, M. and Loboda, T. 2018. The sign, magnitude and potential drivers of change in surface water extent in Canadian tundra. **Environmental Research Letters**, **13**, 045009.
- Chen, D. and Loboda, T., 2018. Surface Forcing of Surface Fires in Siberian Larch Forests. **Environmental Research Letters**, **13**, 045008.
- Chen, D., Loboda, T., He, T., Zhang, Y., Liang, S., 2018. Strong cooling induced by stand-replacing fires through albedo in Siberian larch forests. **Scientific Reports** **8**: 4821. doi:10.1038/s41598-018-23253-1
- Hall, J. and Loboda, T. 2017. Quantifying the potential for low-level transport of black carbon emissions from cropland burning in Russia to the snow-covered Arctic. **Frontiers in Earth Science**, **5**:109. doi: 10.3389/feart.2017.00109
- Groisman, P., Kicklighter, D., Henebry, G., Shugart, H., Tchebakova, N., Maksyutov, S., Monier, E., Gutman, G., Gulev, S., Qi, J., Prishchepov, A., Kukavskaya, E., Porfiriev, B., Shiklomanov, A., Loboda, T., Shiklomanov, N., Nghiem, S., Bergen, K., Albrechtová, J., Chen, J., Shahgedanova, M., Shvidenko, A., Speranskaya, N., Soja, A., deBeurs, K., Bulygina, O., McCarty, J., Zhuang, Q., Zolina, O. 2017. Northern Eurasia Future Initiative (NEFI): Facing the Challenges and Pathways of Global Change in the 21st Century. **Progress in Earth and Planetary Science**, **4**:41. doi 10.1186/s40645-017-0154-5
- Shevade, V., Potapov, P., Harris, N., Loboda, T., 2017. Expansion of industrial plantations continues to threaten Malayan tiger habitat. **Remote Sensing**, **9**, 747; doi:10.3390/rs9070747
- Carroll, M. and Loboda, T.V., 2017. Multi-decadal surface water dynamics in the North American Tundra. **Remote Sensing**, **9**(5), 497, doi:10.3390/rs9050497
- Shuman, J.K., Foster, A.C., Shugart, H.H., Hoffman-Hall, A., Krylov, A., Loboda T., Ershov, D., Sochilova, E., 2017. Increasing Russian fire disturbance: Implications for forest biomass and composition. **Environmental Research letters**, **12**, 035003.
- Loboda, T.V. and Chen, D., 2017. Spatial distribution of young forests and carbon fluxes within recent disturbances in Russia. **Global Change Biology**, **23** (1): 138-153 doi: 10.1111/gcb.13349.
- Barrett, K., Loboda, T., McGuire, A. D., Genet, H., Hoy E., Kasischke E., 2016. Static and dynamic controls on fire activity at moderate spatial and temporal scales in the Alaskan boreal forest. **Ecosphere**, **7** (11): e01572.
- Chen, D., Loboda, T.V., Krylov, A., Potapov, P., 2016. Mapping stand age dynamics of the Siberian larch forests from recent Landsat observations. **Remote Sensing of Environment**, **187**: 320-331.
- Hall, J., Loboda, T.V., Giglio, L., McCarty, G., 2016. A MODIS-based burned area assessment for Russian croplands: mapping requirements and challenges. **Remote Sensing of Environment**, **184**: 506-521.
- Zarin, D., Harris, N., Baccini, A., Aksenov, D., Hansen, M., Ramos, C., Azevedo, T., Margono, B., Alencar, A., Gabris, C., Allegretti, A., Potapov, P., Farina, M., Walker, W., Shevade, V., Loboda,

- T., Turubanova, S., Tyukavina, A., 2016. Can carbon emissions from tropical deforestation drop by 50% in five years? **Global Change Biology**, 22, 1336–1347 doi: 10.1111/gcb.13153
- French, N.H.F., Jenkins, L., Loboda, T.V., Flannigan, M., Jandt, R., Bourgeau-Chavez, L.L., Whitley, M., 2015. Fire in Arctic Tundra of Alaska: Past fire activity, future fire potential, and significance for land management and ecology. **International Journal of Wildland Fire**, 24(8): 1045-1061
- Loboda, T.V., 2014. Adaptation strategies to climate change in the Arctic: a global patchwork of reactive community-scale initiatives. **Environmental Research Letters**, 9: 111006.
- Billmire, M., French, N.H.F., Loboda, T., Owen, R.C., Koziol, B.W., Tyner, M., 2014. Santa Ana winds and predictors of wildfire progression in southern California. **International Journal of Wildland Fire**, 23: 1119-1129.
- Krylov, A., McCarty, J.L., Potapov, P., Loboda, T., Tyukavina, A., Turubanova, S., Hansen, M.C., 2014. Remote sensing estimates of stand-replacing fires in Russia, 2002-2011. **Environmental Research Letters**, 9:105007.
- Chen, D., Loboda, T.V., Hall, A., Channan, S., 2014. Long-term record of sampled disturbances in Northern Eurasian boreal forest from pre-2000 Landsat data. **Remote Sensing**, 6: 6020-6038. doi:10.3390/rs6076020
- Jenkins, L.K., Bourgeau-Chavez, L.L., French, N.H.F., Loboda, T.V., Thelen, B., 2014. Detection and Monitoring of Fire Disturbance in the Alaskan Tundra Using a Two-decade Long Record of Synthetic Aperture Radar Satellite Images. **Remote Sensing**, 6: 6347-6364. doi:10.3390/rs6076347
- O'Neal, K. J., Loboda, T. V., Rogan, J., Yool, S., 2013. Woody plant encroachment in semi-arid Madrean grasslands of southeastern Arizona. **The Southwestern Geographer**, 16: 26-41.
- Thelen, B., French, N.H.F., Koziol, B.W., Billmire, M., Owen, R.C., Johnson, J. Ginsberg, M., Loboda, T., Wu, S., 2013. Modeling acute respiratory illness during the 2007 San Diego wildland fires using a coupled emissions-transport system and general additive modeling, *Environmental Health*, 12(1), 94, doi:10.1186/1476-069X-12-94.
- Marx, A.J. and Loboda, T.V., 2013. Landsat-based early warning system to detect the destruction of villages in Darfur, Sudan. **Remote Sensing of Environment**, 136: 126-134.
- Loboda, T.V., French, N.H.F., Hight-Harf, C., Jenkins, L., Miller, M.E., 2013. Mapping fire extent and burn severity in Alaskan tussock tundra: An analysis of the spectral response of tundra vegetation to wildland fire. **Remote Sensing of Environment**, 134: 194-209.
- Loboda, T.V., Giglio, L., Boschetti, L., Justice, C.O., 2012. Regional fire monitoring and characterization using global NASA MODIS fire products in dry lands of Central Asia. **Frontiers of Earth Science**, 6 (2): 196-205.
- Loboda, T.V., Zhang, Z., O'Neal, K.J., Sun, G., Csiszar, I.A., Shugart, H.H., Sherman, N.J., 2012. Reconstructing disturbance history from distribution of land covers in the Russian Far East. **Remote Sensing of Environment**, 118: 241-248. doi:10.1016/j.rse.2011.11.022.
- Gorsevski, V., Kasischke, E.S., Dempewolf, J., Loboda, T., Grossmann, F., 2012. Impacts of armed conflict on the Eastern Afromontane forest region on the Sudan – Uganda border. **Remote Sensing of Environment**, 118: 10-20.
- Carroll, M.L., Townshend, J.R.G., DiMicelli, C.M., Loboda, T., Sohlberg, R.A., 2011. Shrinking lakes of the Arctic: spatial relationships and trajectory of change. **Geophysical Research Letters** 38, L20406, doi:10.1029/2011GL049427
- Pflugmacher, D., Krankina, O., Cohen, W., Friedl, M., Sulla-Menashe, D., Kennedy, R., Nelson, P., Loboda, T., Kuemmerle, T., Dyukarev, E., Elsakov, V., Kharuk, S., 2011. Comparison and Assessment of Coarse Resolution Land Cover Maps for Northern Eurasia. **Remote Sensing of Environment**, 115 (12): 3539-3553, doi:10.1016/j.rse.2011.08.016.

- Kasischke, E.S., Loboda, T., Giglio, L., French, N.H.F., Hoy, E.E., de Jong, B., Riano, D. 2011. Quantifying burned area from fires in North American forests – implications for direct reduction of carbon stocks. **Journal of Geophysical Research**, **116**, G04003, doi: 10.1029/2011JG001707.
- Loboda, T.V., Hoy, E., Giglio, L., Kasischke, E.S. 2011. Mapping burned area in Alaska using MODIS data: A data limitations-driven modification to the regional burned area algorithm. **International Journal of Wildland Fire**, **20**: 487–496.
- McCarty, J., Korontzi, S., Justice, C., Loboda, T. 2009. The spatial and temporal distribution of crop residue burning in the contiguous United States. **Science of the Total Environment**, **407 (21)**: 5701-5712.
- Loboda, T., 2009. Modeling Fire Danger in Data-Poor Regions: A case study from the Russian Far East. **International Journal of Wildland Fire**, **18 (1)**: 19-35.
- Giglio, L., Loboda, T., Roy, D.P., Quayle, B., Justice, C.O., 2009. An Active-Fire Based Burned Area Mapping Algorithm for the MODIS Sensor. **Remote Sensing of Environment**, **113 (2)**: 408-420.
- McCarty, J., Loboda, T., Trigg, S., 2008. A hybrid approach to quantifying crop residue burning in the US based on burned area and active fire data. **Applied Engineering in Agriculture**, **24 (4)**: 515-527.
- Leptoukh, G., Csiszar, I., Romanov, P., Shen, S., Loboda, T., Gerasimov, I., 2007. NASA NEESPI Data and Services Center for Satellite Remote Sensing Information. **Environmental Research Letters**: doi:10.1088/1748-9326/2/4/045009.
- Loboda, T., O’Neal, K.J., Csiszar, I., 2007. Regionally adaptable dNBR based algorithm for burned area mapping from MODIS data. **Remote Sensing of Environment** **109**: 429 – 442.
- Loboda, T. and Csiszar, I., 2007. Assessing the Risk of Ignition in the Russian Far East within a Modeling Framework of Fire Threat. **Ecological Applications**, **17 (3)**: 791-805.
- Loboda, T. and Csiszar, I., 2007. Reconstruction of Fire Spread within Wildland Fire Events in Northern Eurasia from the MODIS Active Fire Product. **Global and Planetary Change**, **56 (3-4)**: 258-273.
- Korontzi, S., McCarty, J., Loboda, T., Kumar, S., Justice, C., 2006. Global distribution of agricultural fires in croplands from 3 years of Moderate Resolution Imaging Spectroradiometer (MODIS) data. **Global Biogeochemical Cycles**, **20**, GB2021, doi:10.1029/2005GB002529.
- Loupian, E.A., Mazurov, A.A., Flitman, E.V., Ershov, D.V., Korovin, G.N., Novik, V.P., Abushenko, N.A., Altyntsev, D.A., Koshelev, V.V., Tashchilin, S.A., Tatarnikov, A.V., Csiszar, I.A., Sukhinin, A.I., Ponomarev, E.I., Afonin, S.V., Belov, V.V., Matvienko, G.G., Loboda, T., 2006. Satellite Monitoring of Forest Fires in Russia at Federal and Regional Levels. **Mitigation and Adaptation Strategies for Global Change**, **11 (1)**: 113-145.
- Sukhinin, A.I., French, N.H.F., Kasischke, E.S., Hewson, J.H., Soja, A.J., Csiszar, I., Hyer, E.J., Loboda, T., Conard, S.G., Romasko, V.I., Pavlichenko, E.A., Miskiv, S.I., Slinkina, O.A., 2004. AVHRR-based Mapping of Fires in Russia: New Products for Fire Management and Carbon Cycle Studies. **Remote Sensing of Environment**, **93**: 546-564.

Published data sets

- Loboda, T.V., Jenkins, L., Chen, D., He, J., Baer, A.E. (submitted). ABoVE: Unburned & Burned Field Sites in Alaskan Tundra. Submitted to the ORNL DAAC.
- Chen, D., Baer, A., He, J., Hoffman-Hall, A., Shevade, V., Ying, Q., Loboda, T.V. 2020. Land cover land use map for Myanmar at 30-m resolution for 2016. PANGAEA, <https://doi.pangaea.de/10.1594/PANGAEA.921126>
- He, J., T.V. Loboda, L. Jenkins, and D. Chen. 2019. ABoVE: Distribution Maps of Wildland Fire Fuel Components across Alaskan Tundra, 2015. ORNL DAAC, Oak Ridge, Tennessee, USA. <https://doi.org/10.3334/ORNLDAAC/1761>
- Loboda, T.V., D. Chen, J.V. Hall, and J. He. 2018. ABoVE: Landsat-derived Burn Scar dNBR across Alaska and Canada, 1985-2015. ORNL DAAC, Oak Ridge, Tennessee, USA. <https://doi.org/10.3334/ORNLDAAC/1564>

- Pu, R., Z. Li, P. Gong, I.A. Csiszar, R. Fraser, W.M. Hao, S. Kondragunta, T.V. Loboda, J.V. Hall, and V.S. Shevade. 2018. ABoVE: AVHRR-Derived Forest Fire Burned Area-Hot Spots, Alaska and Canada, 1989-2000. ORNL DAAC, Oak Ridge, Tennessee, USA.
<https://doi.org/10.3334/ORNLDAAC/1545>
- Loboda, T.V., and E.E. Hoy. 2017. CMS: Fire Weather Indices for Interior Alaska, 2001-2010. ORNL DAAC, Oak Ridge, Tennessee, USA. <https://doi.org/10.3334/ORNLDAAC/1509>
- Loboda, T.V., and J.V. Hall. 2017. ABoVE: Wildfire Date of Burning within Fire Scars across Alaska and Canada, 2001-2015. ORNL DAAC, Oak Ridge, Tennessee, USA.
<https://doi.org/10.3334/ORNLDAAC/1559>
- Loboda, T.V., J.V. Hall, A. Hoffman-Hall, and V.S. Shevade. 2017. ABoVE: Cumulative Annual Burned Area, Circumpolar High Northern Latitudes, 2001-2015. ORNL DAAC, Oak Ridge, Tennessee, USA.
<https://doi.org/10.3334/ORNLDAAC/1526>
- Loboda, T.V., E.E. Hoy, and M.L. Carroll. 2017. ABoVE: Study Domain and Standard Reference Grids. ORNL DAAC, Oak Ridge, Tennessee, USA. <http://dx.doi.org/10.3334/ORNLDAAC/1367>
- Chen, D., T.V. Loboda, A. Krylov, and P. Potapov. 2016. Distribution of Siberian Larch and Estimated Stand Age Across Russia, 1989-2012. ORNL DAAC, Oak Ridge, Tennessee, USA.
<http://dx.doi.org/10.3334/ORNLDAAC/1364>
- Loboda, T.V., and D. Chen. 2016. Distribution of Young Forests and Estimated Stand Age across Russia, 2012. ORNL DAAC, Oak Ridge, Tennessee, USA. <http://dx.doi.org/10.3334/ORNLDAAC/1330>
- Chen, D., Loboda, T.V., Channan, S., Hoffman-Hall, A. 2015. Russian Boreal Forest Disturbance Maps Derived from Landsat Imagery, 1984-2000. ORNL DAAC, Oak Ridge, Tennessee, USA.
<http://dx.doi.org/10.3334/ORNLDAAC/1294>

Books Edited

- Loboda, T.V., French, N.H.F., Puett, R. (under contract). “Fire, Smoke and Health: Following the smoke from flames to health and wellbeing”, American Geophysical Union/Wiley.
- Loboda, T.V. (2017) “Mapping Land Surface Types and Changes”, Volume 6 of the S. Liang (Ed.) “Comprehensive Remote Sensing”, Elsevier, ISBN: 9780128032206

Book chapters

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- Loboda, T.V., Krankina, O.N., Kurbanov, E.A., Savin, I., Hall, J.V., 2016. Land management and impact of 2010 extreme drought event on agricultural and ecological systems of European Russia. In G. Gutman and V. Radeloff (eds.) Land-cover and land-use change in Eastern Europe 1990-2010: Impacts of the breakup of the Soviet Union. pp 173-192.
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- Siberia as a Baseline Component of the Northern Eurasia Earth Science Partnership Initiative (NEESPI) Studies. In G. Gutman and P. Ya. Groisman, (eds) *Regional Environmental Changes in Siberia and Their Global Consequences*. Springer, pp.357. ISBN 978-94-007-4568-1
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- Loboda, T.V., 2010. Biome: Boreal Forest. In B. Warf (Ed.) **Encyclopedia of Geography**, 214-217. Sage Publications Inc, ISBN 9781412956970.
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Conference proceedings, papers and published reports

- Loboda, T.V., Krankina, O.N., Kurbanov, E. 2012. Understanding Origins and Impacts of Drought Impacts of extreme weather on natural, socio-economic, and land-use systems: Focus on the 2010 summer anomaly in the Volga region. *EOS*, 93(42): 417.
- Loboda, T., Justice, C.O., Gutman, G., Krankina, O., Kurbanov, E., 2012. Meeting report from the NASA Science Meeting, GOFD-GOLD and NEESPI Workshop and Regional Conference “Impacts of extreme weather on natural, socio-economic, and land-use systems: Focus on the 2010 summer anomaly in the Volga region”. **The Earth Observer**, 24(5): 36-39.
- Loboda, T., Justice, C, Gutman, G., Spivak, L., Krankina, O., Muratova, N., 2010. Meeting report from the Joint NASA LCLUC Science Team Meeting and GOFD-GOLD/NERIN, NEESPI, MAIRS Workshop “Monitoring Land Cover, Land Use and Fire in Agricultural and Semi-arid Regions of Northern Eurasia”. **The Earth Observer**, 22(1): 14 – 17.
- Shugart, H.H., Shuman, J.K., Sherman, N.J., Loboda, T.V., 2008. Large-scale vegetation cover dynamics under disturbances and climatic changes. *Proceedings of the Northern Eurasian Earth Science Partnership Initiative (NEESPI) Regional Science Team Meeting devoted to the High Latitudes, 2-6 June, Helsinki, Finland. iLEAPS Report Series No 1.*
- Leptoukh, G., Shen, S., Loboda, T., Csiszar, I., Romanov, P., Gerasimov, I., 2008. Giovanni Services for the NEESPI Domain. *Proceedings of the Northern Eurasian Earth Science Partnership Initiative (NEESPI) Regional Science Team Meeting devoted to the High Latitudes, 2-6 June, Helsinki, Finland. iLEAPS Report Series No 1.*
- Csiszar, I., French, N., Loboda, T., Giglio, L., Hockenberry, T. A multi-sensor approach to fine-scale fire characterization. **Proceedings of 31st International Symposium on Remote Sensing, St. Petersburg, Russia, 2005.** CD-Rom
- Loboda, T. and I.Csiszar. Estimating burned area from AVHRR and MODIS: validation results and sources of error. **Proceeding of the 2nd Open All-Russia Conference: Current Aspects of Remote Sensing of Earth from Space (Physical basics, methods and monitoring technologies of environment, potentially dangerous phenomena and objects), Moscow, Russia, 2004.** Space Research Institute of the Russian Academy of Sciences, Publishing House GRANP, Moscow 2005. Volume 2: 415-421.

AWARDS

- Feb 2020 Honoree, 2020 Maryland Research Excellence Celebration, University of Maryland
- May 2016 Honoree, 9th Annual University-Wide Celebration of Scholarship and Research, University of Maryland

- May 2006 The Department of Geography of the University of Maryland at College Park **O.E. Baker Award for outstanding performance as a graduate student in Geography**
- Apr 2004 Estimating Potential Fire Danger in Siberian Tiger Habitat **1st place in the Graduate Research Interaction Day competition (Arts and Humanities section)**, University of Maryland, College Park, USA.
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RECENT PRESENTATIONS (past 3 years)

- Jan 2021 Quantifying Impact of Boreal and Tundra PM_{2.5} and PM₁₀ Fire Emissions on Air Quality and Spatial Distribution of Potential for Adverse Health Outcomes. **101st Annual Meeting of the American Meteorological Society**, virtual, (January 10 – 15, 2021) (oral presentation)
- Dec 2020 Continental-scale impacts of fire PM_{2.5} emissions from boreal and tundra fires on air quality and health. **Fall meeting of the American Geophysical Union**, virtual (December 1-15, 2020) (oral presentation)
- Nov 2020 Assessing multi-scale exposure pathways in zones of patchy distribution of malaria reservoirs within remote regions of Myanmar. **American Society of Tropical Medicine and Hygiene (ASTMH) Annual Meeting**, virtual, (November 15-19, 2020), (oral presentation)
- Sep 2020 Multi-Sensor Data for Myanmar Malaria Early Warning System. **NASA Health and Air Quality Applications Program Science Team Meeting**, virtual (September 15 & 21, 2020) (oral presentation)
- Jun 2020 Assessing impact of climate-driven increase in wildfire emissions on air quality and health of urban and indigenous populations in Alaska. **6th ABoVE Science Team Meeting**, virtual (June 1 – 3, 2020) (oral presentation).
- Dec 2019 Quantifying variability in fire-driven PM_{2.5} concentrations within Alaska during years of low, moderate, and high fire activity. **Fall meeting of the American Geophysical Union**, San Francisco CA (December 9-13, 2019) (poster presentation).
- Sep 2019 Modeling and assessing fire-driven PM_{2.5} concentrations within Alaska. **NASA Joint Terrestrial Ecology meeting**, College Park MD (September 23 – 25, 2019) (poster presentation)
- Sep 2019 Myanmar Malaria Early warning system (MMEWS). **NASA Health and Air Quality Applications Science Team meeting**, Rapid City SD (September 10-12, 2019) (oral presentation)
- May 2019 Building trajectories of tussock tundra post-fire recovery from field observations. **5th NASA Arctic Boreal Vulnerability Experiment Science Team meeting**, La Jolla CA (May 20 – 23, 2019) (poster presentation)
- May 2019 Assessing impact of climate-driven increase in wildfire emissions on air quality and health of urban and indigenous populations in Alaska. **5th NASA Arctic Boreal Vulnerability Experiment Science Team meeting**, La Jolla CA (May 20 – 23, 2019) (oral presentation)
- Apr 2019 Malaria landscape: examining the role of land cover / land use nexus in malaria transmission in Myanmar. **4th Open Science Meeting of the Global Land Programme**, Bern, Switzerland (April 24-26, 2019). (Invited oral presentation)
- Feb 2019 Myanmar Malaria Early Warning System (MMEWS): Multi-sensor satellite data fusion system for monitoring environmental predictors of malaria in the region of emerging artemisinin resistance. A lightning presentation at the National Socio-Environmental Synthesis Center (SESYNC), Annapolis MD (February 5-6, 2018) (Invited oral presentation)

Tatiana V. Loboda: Curriculum Vitae

- Dec 2018 Mapping and Monitoring Myanmar's Malaria Landscape. **Fall meeting of the American Geophysical Union**, Washington DC (December 10-14, 2018) (poster presentation).
- Oct 2018 Mapping the Malaria landscape of Myanmar: Examining the role of land cover / land use in malaria transmission. A guest presentation at the National Socio-Environmental Synthesis Center (SESYNC), Annapolis MD (October 16, 2018) (Invited oral presentation)
- Apr 2018 Understanding the role of land cover / land use nexus in malaria transmission under changing socio-economic climate in Myanmar. **NASA Land Cover Land Use Change program science meeting**, Gaithersburg, MD (Apr 3-5, 2018) (oral presentation)
- Mar 2018 Climate change, sustainability, and wildland fire. Sustainability Seminar Series at York College of Pennsylvania, York, PA (invited oral presentation).
- Feb 2018 Satellite Monitoring and Remote Sensing: Early Warning System. Department of Public Health, Ministry of Health and Sports (MoHS), The Republic of the Union of Myanmar (invited presentation)
- Jan 2018 Modeling malaria hotspots using satellite images. Department of Medical Research and Defense Services Medical Research Center, The Republic of the Union of Myanmar (invited presentations)
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TEACHING

Position **Instructor (June 2005 – December 2009); Professor (August 2010 – present)**

Courses:

The Nature and Practice of Science (GEOG601)

- graduate gateway course
- 20 students (per semester)

From Communicating Science to Facilitating Learning and Didactical Skills (GEOG788D)

- graduate gateway course in teaching and communication
- 20 students (per semester)

Advanced Remote Sensing: Remote Sensing Instruments and Observations (GEOG 671)

- graduate course
- 12 students (per semester)

Introduction to Remote Sensing (GEOG 372)

- undergraduate course
- 50 students (per semester)

Remote Sensing: Digital Image Processing and Analysis (GEOG472)

- undergraduate course
- 50 students (per semester)

Seminar in Physical Geography: Biophysical and human dimensions of regional climate change (GEOG 748M)

- graduate seminar
- 6 students

Introduction to Programming for Geographers (GEOG 376 (former GEOG398A))

- undergraduate course
- 50 students (per semester)

Object-oriented Programming for Geographers (GEOG 476)

- undergraduate course
- 50 students (per semester)

Introduction to Climatology (GEOG 345)

- undergraduate course
- 60 students (per semester)

Introduction to Remote sensing and GIS for Master in the Professional Studies in GIS Program (GEOG 579)

- on-line graduate course
- prerequisite for MPS in GIS program

Introduction to Quantitative Methods for the Geographic Environmental Sciences (GEOG 506)

- on-line graduate course
- prerequisite for MPS in GIS program

Introduction to GIS (GEOG 373)

- undergraduate course
- 28 students (per semester)

***Position* Guest Instructor (October 20, 2014) at the regional network training session within the NASA LCLUC Science Team Meeting Training, Sopron, Hungary**

- Moderate Resolution Imaging Spectroradiometer (MODIS): data specifics, access, preprocessing, and analysis

***Position* Guest Instructor (June 22, 2012) at the NASA Science Meeting, GOFC-GOLD and NEESPI Workshop and Regional Conference, Yoshkar-Ola, Russia**

- Analyzing spectral information in satellite imagery for land cover classification
- Present and future availability of remotely-sensed data

***Position* Main Instructor (November 3-5, 2010) at the Follow- Up Workshop for GOFC-GOLD Data Initiative–Asia and Network Planning Meeting, Tashkent, Uzbekistan**

- Landsat data record, visualization and analysis
- MODIS data record and analysis
- Methods for land cover and land cover change mapping and monitoring.

***Position* Guest Instructor (September 20, 2009) at the regional network training session within the Joint NASA LCLUC Science Team Meeting and GOFC-GOLD/NERIN, NEESPI, MAIRS Workshop, Almaty, Kazakhstan**

- Thematic data analysis of Landsat TM and ETM+ imagery
- MODIS technical overview and products
- Geospatial tools and methods for fire monitoring and management

***Position* Guest lecturer (February, 2005 – present)**

- variety of guest lectures in undergraduate and graduate courses including digital image processing, modeling, research project presentations, climate change, biodiversity

***Position* Senior Instructor (September, 1995 – present)**

- variety of language courses for college and secondary school students and working adults
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SERVICE

Associate Editor

2011 - 2019 Associate Editor for the “International Journal of Wildland Fire”

Reviewer

2019 Reviewed manuscripts for “Nature Communications” and “Nature Geoscience”, reviewed proposals and served on Proposal Review Panels for several NASA and NSF programs

2018 Reviewed manuscripts for “Global Biogeochemical Cycles”, “Environmental Research Letters”, “International Journal of Wildland Fire”, and provided write-in reviews for NSF proposals

2017 Reviewed manuscripts for “Remote Sensing of Environment” and served on the NASA Multi-Platform and Sensor Data Fusion panel

2016 Reviewed manuscripts for “Environmental Research Letters” and “Remote Sensing of Environment” and served on the NASA Earth System Science Fellowship review panel

2015 Reviewed manuscripts for “International Journal of Wildland Fire”, “Journal of Human Rights”, “Remote Sensing of Environment”, “Remote Sensing”.

2014 Reviewed manuscripts for “International Journal of Wildland Fire”, “Polar Geography”, “Remote Sensing of Environment”, “Environmental Research Letters”.

2013 Reviewed manuscripts for “International Journal of Wildland Fire”, “Environmental Research Letters”, “Remote Sensing of Environment”, reviewed proposals for NASA, served on NASA proposal review panels.

2012 Reviewed manuscripts for “International Journal of Wildland Fire”, “Scandinavian Journal of Forest Research”, “Remote Sensing of Environment”, reviewed proposals for NFS and NASA.

2011 Reviewed manuscripts for “International Journal of Wildland Fire”, “Ecosphere”, “Scandinavian Journal of Forest Research”, “Remote Sensing of Environment”, “Remote Sensing”.

2010 Reviewed manuscripts for “Applied Vegetation Science”, “International Journal of Wildland Fire”, “Bioscience”, “Ecological Applications”, “Environmental Monitoring and Assessment”, reviewed proposals for NASA Interdisciplinary Science program

2009 Reviewed manuscripts for “Remote Sensing of Environment”, “International Journal of Wildland Fire”, “Applied Vegetation Science”, reviewed proposals for NSF.

2008 Reviewed manuscripts for “Remote Sensing of Environment”, “International Journal of Wildland Fire”, “Professional Geographer”, “Journal of Environmental Management”, reviewed proposals for NASA Land Cover Land Use Change program

2007 Reviewed manuscripts for “Remote Sensing of Environment” and “International Journal of Wildland Fire”

2006 Reviewed manuscripts for “Journal of Geophysical Research-Biogeosciences”

2005 Reviewed proposals for NASA’s Land Cover Land Use Change program

2005 Reviewed manuscripts for “Canadian Journal of Forest Research” and “International Journal of Wildland Fire”

National and International Activities

2020 – pres Liaison between the Thriving Earth Exchange and the GeoHealth Section of the American Geophysical Union

Tatiana V. Loboda: Curriculum Vitae

- 2019 – 2020 Chair of the User Working Group for the Oak Ridge National Laboratory Distributed Active Archive Center (ORNL DAAC)
- 2018 – 2020 Lead for the Air Quality, Wildfires, and Respiratory Health Working Group of the Group on Earth Observation (GEO) Health Community of Practice.
- 2019 - 2020 Co-Chair of the Wildfire and Disturbances Working Group for the NASA's Arctic Boreal Vulnerability Experiment (ABOVE) Science Team
- 2019 Co-lead for National Socio-Environmental Synthesis Center (SESYNC) Immersion Workshop: Land Systems Science. The National Socio-Environmental Synthesis Center (SESYNC), Annapolis MD (February 5-6, 2019).
- 2018 Co-organizer of the B22A: Advancements in Global Land Cover and Land Use Monitoring session at the Fall meeting of the American Geophysical Union, Washington DC (December 10-14, 2018).
- 2016 - 2017 Member of the organizing committee for the Alaska Fire Science Consortium (AFSC) Workshop Opportunities to Apply Remote Sensing in Boreal/Arctic Wildfire Management and Science (funded by the NASA's Applied Sciences Program), April 4-6, 2017 Fairbanks AK
- 2015 - 2017 Chair of the Geospatial Data Working group for the NASA's Arctic Boreal Vulnerability Experiment (ABOVE) Science Team
- 2015 - 2017 Member of the User Working Group for the Oak Ridge National Laboratory (ORNL) Distributed Active Archive Center (DAAC) for Biogeochemical Dynamics
- 2014 Participant in the NOVUS II workshop as part of the NOVUS Research Coordination Network activity focused on synthesizing academic research and knowledge about disturbances across paleo records, long-term field monitoring programs, and satellite-era observations.
- 2011 – 2012 Organizer for training in remote sensing applications for early-career scientists at the regional GOFD-GOLD workshop "Impacts of extreme weather on natural, socio-economic, and land-use systems: Focus on the 2010 summer anomaly in the Volga region". June 18-22, 2012, Yoshkar-Ola, Russian Federation.
- 2009-2010 Co-lead for the North American Carbon Program Disturbance Synthesis Activity working group 1b
- 2009-2011 Co-lead for the Early Career Scientist Initiative within the NASA LCLUC program
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University Campus Service

- 2020 – 2022 Member of the Programs, Curricula, and Courses (PCC) committee of the University of Maryland Senate

Member of Departmental Committees

- 2018 - present Associate Chair
- 2019 – 2020 Member of the search committee for the Chair of the Department of Geographical Sciences
- 2017-2018 Chair of the Undergraduate committee and elected member of the Department Advisory Committee
- 2016-2017 Elected member of the Department Advisory Committee
- 2014-2016 Chair of the Undergraduate committee and a member of the Faculty committee
- 2015 Member of the Department Chair evaluation committee
- 2013-2016 Member of a search committee for 5 faculty positions
- 2011-2014 Member of the Undergraduate and Faculty committees

Tatiana V. Loboda: Curriculum Vitae

- 2010 Member of Undergraduate, Graduate and Faculty committees, Member of the Faculty Search committee
- 2009 Research Faculty Representative for the Department of Geography Chair Search committee and Departmental Undergraduate Committee
- 2008 Research Faculty Representative for the Recruitment Task Force and the Strategic Planning Departmental Retreat
- 2005-2007 Chair of the Faculty Research Assistant Committee, Geography Department, University of Maryland, College Park, USA
- 2004-2005 Graduate Student Representative for the MS in GIS Committee, Geography Department, University of Maryland, College Park, USA
- 2003 Graduate Student Representative for the Faculty Committee, Geography Department, University of Maryland, College Park, USA
- 2002 Graduate Student Representative for the Graduate Committee, Geography Department, University of Maryland, College Park, USA
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Professional Organizations

2007 – present American Geophysical Union
