

## **Curriculum Vitae**

Notarization. I have read the following and certify that this *curriculum vitae* is a current and accurate statement of my professional record.

### **I. Personal Information**

#### **I.A. Contact Information**

Dr. Maria Zubkova  
Email: mzubkova@umd.edu

4600 River Road  
Riverdale, MD 20737

#### **I.B. Academic Appointments at UMD**

Assistant Research Professor (07/2022 – Present)

Post-Doctoral Associate (01/2020 – 06/2022)

#### **I.C. Other Employment**

Graduate Research Assistant at the University of Idaho, ID (2015 – 2019)

GIS Intern at NextGIS, Russia (2014)

Graduate Research Assistant at the Mediterranean Agronomic Institute of Chania, Greece (2012 – 2014)

#### **I.D. Educational Background**

Ph.D., Natural Resources, University of Idaho, ID (2015 – 2019)

M.Sc., Geoinformation in Environmental Management, Mediterranean Agronomic Institute of Chania, Greece (2011 – 2014)

M.Sc., Landscape Gardening, Russian State Agrarian University, Russia (2006 – 2011)

#### **I.E. Professional Certifications, Licenses, and Memberships**

Cooperative Institute for Satellite Earth System Studies (CISESS) of the Earth System Science Interdisciplinary Center (ESSIC) at the University of Maryland, Scientist

American Geophysical Union (AGU), Member

Women in GIS, Member

Society for Conservation GIS, Member

Association for Women Geoscientists

Society for Conservation Biology, Member

## **II. Research, Scholarly, Creative and/or Professional Activities**

### II.A. Chapters

#### II.A.1. Books

Giglio, L.; Roy, D.P.; Humber, M.L.; Ellicott, E.; **Zubkova, M.**; Justice, C.O. Chapter 3: Mapping and Characterizing Fire. In T. Loboda, N. H.F. French, R. Puett (Eds.), *Fire, Smoke and Health: tracking the modeling chain from flames to health and wellbeing*. (In press).

### II.B. Refereed Journals

#### II.B.1. Refereed Journal Articles

**Zubkova, M.**; Boschetti, L.; Abatzoglou, J.; Giglio, L. 2022. Fire regions as environmental niches: a new paradigm to define potential fire regimes in Africa and Australia. *JGR Biogeosciences*.

Nakalembe, C.L.; **Zubkova, M.**; Hall, J.V.; Argueta-Hassel, F.; Giglio, L. 2022. The Impacts of Large-Scale Population Displacement on Land Cover and Land-Use: Bidi Bidi Refugee Settlement, Uganda Case Study. *Environmental Research Letters*, 17 064019.

Humber, M.; **Zubkova, M.**; Giglio, L. 2022. A Remote Sensing-based Approach to Estimating Global Fire Spread Rates. *International Journal of Remote Sensing*, 43:2, 649-673.

**Zubkova, M.**; Giglio, L.; Humber, M.; Hall, J.H.; Ellicott, E. 2021. Conflict and Climate: Drivers of Fire Activity in Syria in the Twenty-First Century. *Earth Interactions*, 25(1): 119-135.

**Zubkova, M.**; Boschetti, L.; Abatzoglou, J.; Giglio, L. 2019. Changes in Fire Activity in Africa from 2002 to 2016 and Their Potential Drivers. *Geophysical Research Letters*, 46(13): 7643-7653.

Boschetti, L.; Roy, D.; Giglio, L.; Huang, H.; **Zubkova, M.**; Humber, M. 2019. Global validation of the Collection 6 MODIS burned area product. *Remote Sensing of Environment*, 217: 72-85.

Abatzoglou, J.; Williams, P.; Boschetti, L.; **Zubkova, M.**; Kolden, C.A. 2018. Global patterns of interannual climate-fire relationships. *Global Change Biology*, 24(1): 5164-5175.

#### II.B.2. Perspectives, Opinions, and Letters

**Zubkova, M.** and Giglio, L. 2022. Letter to the Editor on 'Nonlinear dynamics of fires in Africa over recent decades controlled by precipitation'. *Global Change Biology*, 28(4): 1197-1199.

Giglio, L; **Zubkova, M.**; D. Roy. 2022. Comment on Otón, G., et al. Analysis of Trends in the FireCCI Global Long Term Burned Area Product (1982–2018). *Fire*, 5(2), 52.

## II.C. Conferences, Workshops, and Talks

### II.C.1. Invited Talks

Boschetti, L.; Roy, D.; Giglio, L.; **Zubkova, M.**; Sparks, A.; Humber, M., “Global Fire Monitoring from Space (the use and misuse of satellite fire products)”. University of Idaho, Department of Forest, Rangeland and Fire Sciences, Feb. 18th, 2020.

Boschetti, L; Roy, D.P.; Giglio, L.; Stehman, S.; Humber, M.; **Zubkova, M.**; Melchiorre, A.; Huang, H.; Huo, L-Z., “Validation of the MODIS Collection 6 MCD64 Global Burned Area Product”. American Geophysical Union (AGU) Fall Meeting, New Orleans, LA, Dec. 10 – 15, 2017.

Giglio, L.; Hall, J.; Humber, M.; **Zubkova, M.**; Roy, D.; Boschetti, L.; Argueta, F.; Schroeder, W.; Justice, C., “NASA Fire Product Status”. GOF-C-GOLD Fire Implementation Team meeting, Stresa, Italy, Jun. 21-23, 2022.

Giglio, L.; Roy, D.; **Zubkova, M.**; Hall, J., “Extending the global fire record back in time before MODIS”. GOF-C-GOLD Fire Implementation Team meeting, Stresa, Italy, Jun. 21-23, 2022.

### II.C.2. Refereed Presentations

**Zubkova, M.**; Giglio, L.; Humber, M.; Hall, J.H.; Ellicott, E. “Conflict and Climate: Drivers of Fire Activity in Syria in the Twenty-First Century”. American Geophysical Union (AGU) Fall Meeting, New Orleans, LA, Dec. 13 – 17, 2021.

Boschetti, L; Roy, D.P.; Giglio, L.; Humber, M.; **Zubkova, M.**; Melchiorre, A.; Huang, H.; Huo, L-Z., “CEOS Stage 3 Validation of the MODIS Collection 6 MCD64 Global Burned Area Product”. Land Product Validation and Evolution Symposium, European Space Agency, Frascati (IT), Feb. 28-Mar. 2, 2018.

Boschetti, L; Roy, D.P.; Giglio, L.; Humber, M.; Kumar, S.; **Zubkova, M.**; Melchiorre, A.; Huang, H.; Huo, L-Z., “Validation of the MODIS Collection 6 MCD64 Global Burned Area Product”. 11th EARSeL Forest Fires SIG Workshop, Chania, Greece, Sep. 25 – 26, 2017.

Gitas, I.; Kalaitzidis C.; **Zubkova, M.**; Mallinis, G. “Monitoring treeline shift over a 60-year period using object-based image analysis of aerial photography and satellite data”. 5th GEOBIA, Thessaloniki, Greece, May 21 - 24, 2014.

### II.C.3. Refereed Posters

**Zubkova, M.** “How conflicts and climate variability shape fire activity in Syria,” Johns Hopkins Postdoctoral Conference, April 2021.

**Zubkova, M.**; Boschetti, L.; Abatzoglou, J., Giglio, J. “Global wildfire regimes and drivers of their spatial and temporal variability,” AAAS, Washington DC, Feb. 14–17, 2019.

**Zubkova, M.;** Boschetti, L.; Abatzoglou, J., Giglio, J. “Changes in Fire Activity in Africa from 2002 to 2016 and Their Potential Drivers,” AGU Fall Meeting, Washington DC, Dec. 10–14, 2018.

**Zubkova, M.;** Boschetti, L.; Abatzoglou, J. “Climate controls on inter-annual variability and trends in fire activity in the African and Australian Continents,” AGU Fall Meeting, New Orleans, LA, Dec. 11 – 15, 2017.

**Zubkova, M.;** Boschetti, L.; Abatzoglou, J. “Climate controls on inter-annual variability and trends in fire activity across Africa,” 2017 Conference on Fire Prediction Across Scales Columbia University, New York City, NY, Oct. 23 – 25, 2017.

Abatzoglou, J.; Williams, P.; Boschetti, L.; **Zubkova, M.;** Kolden, C. “Global patterns of interannual fire-climate relationships,” 2017 Conference on Fire Prediction Across Scales Columbia University, New York City, NY, Oct. 23 – 25, 2017.

**Zubkova, M.;** Boschetti, L. “Characterizing global fire return intervals from the MODIS data record,” AGU Fall Meeting, San Francisco, CA, Dec. 12 – 16, 2016.

#### II.C.4. Non-Refereed Presentations

**Zubkova, M.** “Direct and indirect impacts of human conflict on wildfires,” Women in GIS Meeting, Apr. 6, 2022

#### II.D. Sponsored Research and Programs – Administered by the Office of Research Administration (ORA)

##### II.D.1. Grants

Sponsor: NASA - Washington (Headquarters); Title: Support and Maintenance of S-NPP and JPSS VIIRS Global Active Fire and Burned Area Earth System Data Records; Amount: \$267,345; Period: 3 years; Role: Co-Investigator; Other Senior Personnel: L. Giglio (Principal investigator), J.V. Hall (Co-Investigator), M.L. Humber (Co-Investigator).

Sponsor: NASA - Washington (Headquarters); Title: Is the World Burning Less? Disentangling Decadal Trends, Inter-Annual Fire Variability and Product Uncertainties, through Harmonization of the NASA MODIS and VIIRS Fire Product Record; Amount: \$664,544; Period: 3 years; Role: Co-Investigator; Other Senior Personnel: L. Boschetti (Principal investigator), co-investigators: L. Giglio (Co-Investigator).

Sponsor: NASA - Washington (Headquarters); Title: MODIS Global Active Fire and Burned area Product Maintenance; Amount: \$359,355; Period: 3 years; Role: Co-Investigator; Other Senior Personnel: L. Giglio (Principal investigator), L. Boschetti (Co-Investigator), J.V. Hall (Co-Investigator), M.L. Humber (Co-Investigator).

#### II.E. Research Fellowships, Prizes and Awards

Outstanding Post-doctoral Associate in the Department of Geographical Sciences, 2022

College of Natural Resources Graduate Fellowship award 2019 with the total of \$10,588

4th place at The Three Minute thesis competition

**III. Teaching, Extension, Mentoring, and Advising**

**III.A. Courses Taught**

FOR 375 - Introduction to Spatial Analysis for Natural Resource Management (Fall 2017, Fall 2018, 60 students), TA

SEM 301 - Climate, Carbon and Forests (Fall 2015, 15 students), TA

**III.B. Advising: Research or Clinical**

**III.B.1. Master's**

Georgina Crepps (Summer 2021 – current) Research Project Advisor

Alexander Leikin (Spring 2022) MSc Capstone Project mentorship

**III.C. Mentorship**

**III.C.1. Other**

Maruko Kogure (2021) undergraduate international student at the department of Geographical Sciences

**IV. Service and Outreach**

**IV.A. Editorships, Editorial Boards, and Reviewing Activities**

**IV.A.1. Editorial Boards**

Co-Editor of a Remote Sensing special issue “Remote Sensing Applications in Wildfire Research and Management”.

**IV.A.2. Reviewing Activities for Journals and Presses**

Peer reviewer for manuscripts in: Geophysics, Forests, Atmospheric Chemistry and Physics, Remote Sensing, Ecosystems, and Geocarto International, Fire

**IV.A.3. Reviewing Activities for Conferences**

Judge of the Poster Showcase at the American Geophysical Union (AGU) Fall Meeting, New Orleans, LA, Dec. 13 – 17, 2021.

**IV.B. Committees, Professional & Campus Service**

**IV.B.1. Campus Service – Department**

Volunteer at High school banquet (Jun 2022)

Department Graduate Committee, Research Faculty Representative (2021 - 2022 academic year)

Presented at the Meet the Research Faculty (Fall 2021)

Tenure promotion review committee, University of Idaho (2018)

IV.B.2. Campus Service – College

Participated in the BSOS Buddy program (Fall 2021)

IV.B.3. Campus Service – University

Judge at the 2021 and 2022 Graduate Research Appreciation Day

Terps in Space Mission 17 Review Panel

IV.B.4. Leadership Roles in Meetings and Conferences

Member of a committee for the Outstanding Student Presentation Awards (OSPA) at the American Geophysical Union (AGU) meetings

Member of the Society for Conservation GIS Conference Committee

Moderator for the “Conservation Remote Sensing” and “Climate Change” sessions at the 2022 SCGIS conference

IV.C. Media Contributions

IV.C.1. Internet

Press release about Zubkova et al. (2018) by Leigh Cooper

<https://www.uidaho.edu/news/news-articles/news-releases/2019-june/062719-fewerfiresinafrica>