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Education:

Since 2014

- **PhD student** – SILVIS Lab, Department of Forest and Wildlife Ecology, University of Wisconsin-Madison, USA. Advisor: Volker C. Radeloff – *Mapping tree species in temperate forests with use of satellite data with data from Sentinel-2, Landsat, and MODIS*

2006-2008

- **Master of science** – Faculty of Geography and Regional Studies, University of Warsaw, Department of Geoinformatics and Remote Sensing – *Changes in land use of clearings in Białowieża forest in second part of XX century*

2003-2006

- **Bachelor** – Faculty of Geography and Regional Studies, University of Warsaw, Department of Geoinformatics and Remote Sensing – *Functional structure of Warsaw center district based on IKONOS satellite image and field research*

Work experience:

Since 2017

- **Teaching Assistant** - Introduction to Environmental Remote Sensing (ENVIRST 371), University of Wisconsin-Madison

2014-2017

- **Research Assistant** – SILVIS Lab, WIS01715 *Using satellite data to map tree species in Wisconsin's forests* Department of Forest and Wildlife Ecology, University of Wisconsin-Madison, USA

2011 – 2014

- **Research Specialist** – Institute of Geodesy and Cartography, Department of Remote Sensing, Poland

2009 – 2011

- **Geographer** – Institute of Geodesy and Cartography, Department of Remote Sensing, Poland

2008

- **Institute of Geodesy and Cartography, Remote Sensing Department, Poland**
– field measurements
- **Institute of Geodesy and Cartography, Spatial Information Systems Department Poland**
– image interpretation for CORINE Land Cover 2006 project

Lecturing and teaching:

- **Fall 2017**, Teaching Assistant – Introduction to Environmental Remote Sensing (ENVIRST 371), University of Wisconsin-Madison
- **Spring 2015, Spring 2017** Teaching Assistant – Forest Biometry (F&WECOL 300), University of Wisconsin-Madison
- **2013 GIONET** Summer School Warsaw Poland 18-27 September (field measurements exercises, classes on calculating CO₂ balance)
- **2012 MS MONINA** Summer School, Malaga, Spain 8-13 July - *Methods for monitoring shrub encroachment in wetland ecosystem*

Participation in projects:

- **ESA PECS FIRES** (2014) *Application of remotely sensed data to the management of fire events in Poland* – image processing and GIS analysis
- **ESA PECS** (2012-2014) - *ESA' Geospatial Services for environmental management in Poland* – IGIK representative in the Project, main task: elaboration of the input data for the geoportal which serves as the Service for local and governmental administration
- **FP7: MS.MONINA** (2010-2013) - *Multi-Scale Service for Monitoring NATURA 2000 Habitats of European Community Interest. Elaboration of the service based on Earth Observation data for monitoring NATURA 2000 habitats* – elaboration of maps of vegetation habitats and shrub encroachment (new vegetation succession) in Biebrza National Park (the largest area of wetlands in Europe)
- **ESA PECS CARBON** (2009-2012) *Study and implement remote sensing techniques for the assessment of carbon balances for different biomasses and soil moistures within various ecosystems Elaboration of methodology for evaluating carbon sink by various ecosystems with the use of EO data.* (Field measurements, calculation of CO₂ balance, classification of vegetation species, classification of biomass and soil – vegetation parameters).
- **FP7: Geoland-2** (2008-2012) - *Towards operational GMES Land Monitoring Core System* - preparation of the methods for land cover and land cover change mapping based on very high-resolution and medium-resolution satellite data. Classification of land cover and land cover changes on VHR data: KOMPSAT-2, FORMOSAT-2, IKONOS-2, GEOEYE-2, WORLDVIEW-2 image data for selected areas in Europe.

Technical meetings:

- **GEOLAND-2 SATChMo AFS Europe (Seasonal and Annual Change Monitoring Core Mapping Service)** (Warsaw 2010, Kaunas 2011, Helsinki 2012)

Selected conferences:

- **2017 AGU Fall Meeting - American Geophysical Union**, New Orleans, USA, 11-15 December 2017 (Poster Presentation)
- **NACCB 2016 - North American Congress for Conservation Biology**, Madison, USA, 18-20 July 2016 (Poster Presentation)
- **ESA Sentinel-2 Preparatory Symposium**, Frascati, Italy 23-27 April 2012 (Poster Presentation)
- **EARSel**, Prague, Czech Republic 30 May – 2 June 2011, (Oral Presentation, Poster Presentation)

Courses:

- **ESA Echoes in Space, Introduction to Radar Remote Sensing** (online course), European Space Agency 2017
- **5th EnMAP Summer school on hyperspectral remote sensing**, Trier 4-8 April 2016
- **ESA Advanced Training Course in Land Remote Sensing**, Krakow 12-16 September 2011 r.
- **4th ISPRS SC and WG VI/5 Summer School, Natural environment management, monitoring and conservation**, University of Life Sciences, Warsaw 13-19 July 2009

Skills:

- Digital image processing, analysis, and classification in open source, and commercial software packages i.e. ENVI, eCognition, and ERDAS Imagine
- GIS analyses in ArcGIS environment
- Statistical analysis, spatial statistics and machine learning in R environment
- Script programming in Python and IDL

Languages:

- English (writing: good, reading: good, speaking: good)
- Polish (native speaker)

List of papers, conference proceedings, and book chapters:

- Aleksandrowicz S., **Turlej K.**, Lewinski S., Bochenek Z., 2014, *Change Detection Algorithm for the Production of Land Cover Change Maps over the European Union Countries*, Remote Sens. 2014, Vol. 6, pp. 5976-5994, doi:10.3390/rs6075976
- Dabrowska-Zielinska K., Budzynska M., Tomaszewska M., Bartold M., Gatkowska M., Malek I., **Turlej K.**, 2014 *Monitoring Wetland Ecosystems using ALOS.PALSAR (L-band, HV) Supplemented by Optical Data: A case study of Biebrza Wetlands in Northeast Poland*, Remote Sensing

- Hościło A., **Turlej K.**, 2014, *Use of satellite data for monitoring fire events in Poland*, Proc. 2014 IEEE International Geoscience and Remote Sensing Symposium and 35th Canadian Symposium on Remote Sensing (IGARSS2014), 13-18 July 2014, Quebec, Canada
- Hościło A., **Turlej K.**, Napiórkowska, M., 2014, *Can remotely sensed data be used to support monitoring of fires in Poland?* Proc. of the 34th EARSeL Symposium 2014, 16-20 June 2014, Warsaw, Poland
- Lewinski S., Bochenek Z., **Turlej K.** (2014) Application of an Object-Oriented Method for Classification of VHR Satellite Images Using a Rule-Based Approach and Texture Measures. In: Manakos I., Braun M. (eds) *Land Use and Land Cover Mapping in Europe. Remote Sensing and Digital Image Processing*, vol 18. Springer, Dordrecht
- Ziółkowski D., **Turlej K.**, Bochenek Z., 2014 Indicators of environmental diversity derived from remote sensing based land cover maps – spatial and thematic aspects *Ecological Questions*
- **Turlej K.**, Bojanowski J., Bartold M., 2013., Agriculture mask for crop growth monitoring in Poland using NOAA-AVHRR time series: a study of pixel purity, *Archives of Photogrammetry Cartography and Remote Sensing* Vol. 25, pp. 233-242
- Ziolkowski D., **Turlej K.**, Bochenek Z., 2013, Indicators of environmental diversity derived from remote sensing based land cover maps – spatial and thematic aspects. *Ecological Questions*, 17, pp. 113–129
- Dabrowska-Zielinska K., Budzynska M., Kowalik W., Malek I., Gatkowska M., Bartold M., **Turlej K.**, 2012, Biophysical Parameters Assessed from Microwave and Optical Data, *International Journal of Electronics and Telecommunications*, vol. 58, No 2, pp. 99-104
- Dabrowska-Zielinska K., Budzynska M., Rychlik S., Malek I., **Turlej K.**, Bartold M., Gatkowska M., 2012, Study in Biebrza Wetlands using optical and microwave satellite data; PECS Project: Study and implementation of remote sensing techniques for the assessment of carbon balances for different biomasses and soil moistures within various ecosystems, Abstract Volume, ESA DUE Permafrost Final Workshop, Potsdam, Germany, 15th-17th February, 2012
- Dabrowska-Zielinska, K., Budzynska M., Tomaszewska M., Bartold M., **Turlej K.**, 2012, ENVISAT.MERIS spectra bands and ENVISAT ASAR – discussion on applications of Sentinel 1 and 2 for agriculture in Poland, *Geophysical Research Abstracts* Vol. 14, EGU General Assembly 2012, Vienna
- Lewinski S., Bochenek Z., **Turlej K.**, Aleksandrowicz S., Tomaszewska M., 2012, Land Cover Mapping for Pan European Land Monitoring, The Growing Use of GMES across Europe's Regions, European Environment Agency (EEA), 22nd October, 2012, pp. 26-28
- **Turlej K.**, Dąbrowska-Zielińska K., Bartold M., 2011, *Land Cover Changes in Wetland Ecosystem – Case Study Biebrza Valley, Poland*, Proc. 31th EARSeL Symposium 2011, Prague, Czech Republic, May 30- June 2 2011

- Dabrowska-Zielinska K., Budzynska M., **Turlej K.**, Bartold M., Bochenek Z., 2011, Land Cover and biomass changes in wetland ecosystem - case study Biebrza Valley Poland, Proceedings of 4th EARSel SIG Workshop on Remote Sensing of Land Use & Land Cover, 1-3 June, Prague Czech Republic
- **Turlej K.**, Bartold M., Lewiński S., 2010, *Analysis of extent and effects caused by the flood wave in May and June 2010 in the Vistula and Odra River Valleys*, Geoinformation Issues, Vol.2, No.1
- Lewiński St., Bochenek Z., **Turlej K.**, 2010, *Object-oriented method for classification of VHR satellite images using rule-based approach*, Geoinformation Issues, IGIK, Warsaw, Vol.2 No.1
- Dąbrowska-Zielińska K., Budzyńska M., Kowalik W., Malek I., **Turlej K.**, 2010, Characterizing status of selected ecosystems using optical and microwave remote sensing data, Proc. ESA Living Planet Symposium, Bergen, Norway, 28 June-2 July 2010
- Dąbrowska-Zielińska K., Budzyńska M., Kowalik W., Malek I., **Turlej K.**, 2010, *Study in Biebrza Wetlands using optical and microwave satellite data*, Proc. 2010 IEEE International Geoscience and Remote Sensing Symposium, Honolulu, Hawaii, 25-30 July 2010
- Dąbrowska-Zielińska K., Budzyńska M., Kowalik W., Malek I., **Turlej K.**, Bochenek Z., 2009, *Soil moisture and evapotranspiration of wetlands vegetation habitats retrieved from satellite images*, Proc. EGU Conference Earth Observation and Water Cycle Science, ESA-ESRIN, Frascati, Italy, 18-20 November 2009
- **Turlej K.**, 2009, *Comparison of NDVI index based on NOAA AVHRR, SPOT-VEGETATION and TERRA MODIS satellite data*, Teledetekcja Środowiska, Vol.42, pp. 83-88