

JUSTYNA JEZIORSKA

919-696-1785

jajezior@ncsu.edu

address:

611 Crimson Cross Ct. #202
Raleigh, NC 27606

RESEARCH INTERESTS

Geoprocessing, Environmental GIS Analysis, Hydrological modelling, Unmanned Aerial Vehicle Photogrammetry, GIS in education

EDUCATION

Degrees	Ph.D. Program, Department of Geoinformatics and Cartography, University of Wrocław.	
	Ph.D. Thesis: <i>Applicability of Unmanned Aerial Vehicle for verifying the inundation model based on chosen hydrograph predictions.</i>	
	MS in Geography, specialization in Cartography	2010
	BS in Geography	2008
	– University of Wrocław, Poland	
Master's Thesis	<i>Automation of Geoprocessing in ArcGIS 9.3</i>	2010
	– Built a computer model of potential soil erosion in Poland.	
	– Received the highest grade (5.0) on a scale of 2.0-5.0.	
	– Placed fourth in the nation for Best Master's Thesis in Cartography.	
Study Abroad	Ruhr-Universität Bochum, Germany	Fall 2008
	– Master's-level study in Geomatics.	
	– Single student selected from among 40,000+ students at the University of Wrocław to participate in this exchange program.	
	Westfälische Wilhelms-Universität Münster, Germany	Fall 2007
	– Undergraduate study in Geography, Geoinformatics, and GIS.	

INDUSTRY EXPERIENCE

Research Scholar and Teaching Assistant	North Carolina State University, Department of Marine, Earth and Atmospheric Sciences	
	- Developing curriculum for innovative course “Multitemporal Modeling with UAV, Lidar, and Tangible Landscapes”	
Visiting Scholar	North Carolina State University, Department of Marine, Earth and Atmospheric Sciences	
	- Hydrological modelling and discharge prediction	
	- Application of hydrological algorithms in innovative 3D tool “Tangible Landscape”	
	- Analysis of Unmanned Aerial Vehicle derived data	
Grant	Investigator in project: <i>System supporting a comparison of hydrologic predictions</i>	ongoing
	The research project, No. 2011/01/D/ST10/04171, funded by the National Science Centre	
Internship	Geomatic, Wrocław, Poland (http://www.geomatic.pl/)	2009
	– Digitized aerial surveillance data for the Polish Ministry of Agriculture.	
	– Created maps of farmland from aerial photos to confirm plantings of crops.	

TEACHING EXPERIENCE

Undergraduate courses	University of Wroclaw: - Introduction to Cartography, 1 st semester, Geography major - Cartography and Topography, 1 st semester, Geography major	2014 2012/2013
Graduate courses	University of Wroclaw: - Unmanned Aerial Observations of the Earth, 2 nd semester, Geoinformatics and Cartography major	2014
	North Carolina State University: - Multitemporal Modeling with UAV, Lidar, and Tangible Landscapes	ongoing

PUBLICATIONS

In Preparation/ Submitted	Latocha, A., Szymanowski, M., Jeziorska, J. , Stec M., Roszczewska, M., Land abandonment and climate change as factors influencing soil erosion – an example from depopulated agricultural lands in the Sudety Mts, SW Poland.
	Niedzielski, T., Miziński, B., Kryza, M., Netzel, P., Wieczorek, M., Kasprzak, M., Migoń, P., Szymanowski, M., Jeziorska, J. , Witek, M., Kosek, W., HydroProg: system for hydrological forecasting in real time based on multimodelling approach. Meteorology Hydrology and Water Management. Research and Operational Application.
Accepted	Jeziorska, J. , Niedzielski, T., Applicability of TOPMODEL in the moutainous catchments in the upper Nysa Kłodzka River basin (SW Poland). Pure and Applied Geophysics.
Published	Witek, M., Jeziorska, J. , Niedzielski, T., 2013. Możliwości wykorzystania bezzałogowej fotogrametrii lotniczej do identyfikacji przekształceń antropogenicznych w korytach rzecznych. Landscape Analysis. Vol. 24: 115–126, Witek, M., Jeziorska, J. , Niedzielski, T., 2014 An Experimental approach to verify prognoses of floods using the unmanned aerial vehicle. Meteorology Hydrology and Water Management. Research and Operational Application. 1/2014 Vol. 2 Niedzielski, T., Miziński, B., Kryza, M., Netzel, P., Wieczorek, M., Kasprzak, M., Migoń, P., Szymanowski, M., Jeziorska, J. , Witek, M., Kosek, W., 2014. Multimodel ensemble predictions of river stages computed in real time:application of the HydroProg system in the upper Nysa Kłodzka basin (SW Poland). Geophysical Research Abstracts Vol. 16, EGU2014-2362. eISSN 1607-7962 Ślopek, J., Wieczorek, M., Migoń, P., Kasprzak, M., Jeziorska, J. , Witek, M., Spallek, W., and Niedzielski, T., 2014. Detection and classification of channel bedforms observed using the visual-light camera mounted to the unmanned aerial vehicle. Geophysical Research Abstracts Vol. 16, EGU2014-2359. eISSN 1607-7962 Jeziorska, J. , 2014. Unmanned Aerial Vehicle – A Tool for Acquiring Spatial Data for Research and Commercial Purposes. New Course in the Geography and Cartography Curriculum in Higher Education. Int. Arch. Photogramm. Remote Sens. Spatial Inf. Sci., XL-6, 37-42 doi:10.5194/isprsarchives-XL-6-37-2014 Jeziorska, J. , Niedzielski, T., Witek, M. 2013. Unmanned aerial monitoring of fluvial changes in the vicinity of selected gauges of the Local System for Flood Monitoring in Kłodzko County, SW Poland. Geophysical Research Abstracts Vol. 15, EGU2013-12354-2. eISSN 1607-7962 Jeziorska, J. , 2013. Geospatial Revolution (review). Polski Przegląd Kartograficzny 3, 269-270
Other publications (not research papers)	Article and teaching materials in the didactical journal Jeziorska, J. , 2014. Bożonarodzeniowy Wrak - lekcja z wykorzystaniem GIS.Geografia w Szkole, 1/2014, 31-37

CONFERENCES

Oral presentations

Mid-Term Symposium ISPRS Commission VI

Data, Information, and Knowledge Sharing for Geo-Education (international conference)
Wuhan, China; 19 - 21 May 2014

Unmanned Aerial Vehicle – A Tool for Acquiring Spatial Data for Research and Commercial Purposes. New Course in the Geography and Cartography Curriculum in Higher Education
Justyna Jeziorska

22nd Cartographic School 2014 Geoinformatics and Atmospheric Science (international conference)

Wałbrzych-Książ, Poland; 6 - 9 May 2014

Predictions of discharge and river stage using TOPMODEL for the mountainous basin of the upper Nysa Kłodzka River (SW Poland)
Justyna Jeziorska, Tomasz Niedzielski, Maciej Kryza

26th International Cartographic Conference (international conference)

Dresden, Germany; 25 - 30 August 2013

Monitoring hydrological extreme events and their effects using lightweight unmanned aircraft to remote sensing
Justyna Jeziorska, Tomasz Niedzielski, Małgorzata Witek

26th International Cartographic Conference (international conference)

Dresden, Germany; 25 - 30 August 2013

HydroProg: a novel system for hydrological forecasting and flood risk mapping
Tomasz Niedzielski, B. Miziński, M. Kryza, M. Wieczorek, P. Migon, M. Kasprzak, P. Netzel, M. Szymanowski, W. Kosek, M. Witek, J. Jeziorska

Functioning of the river basin ecosystems (VI) – Anthropogenic impact on functioning of the catchment and river valleys

Luboradza, Poland; 23 - 26 April 2013

Capability of unmanned aerial remote sensing for identifying anthropogenic transformations in river channels
(Możliwości wykorzystania bezzałogowej fotogrametrii lotniczej do identyfikacji przekształceń antropogenicznych w korytach rzecznych)

Justyna Jeziorska, Małgorzata Witek, Tomasz Niedzielski

Contemporary problems in hydraulic engineering and water resources management (international conference)

Cracow, Poland; 15 - 17 April 2013

HydroProg: system for hydrological forecasting in real time based on multimodelling approach
Tomasz Niedzielski, B. Miziński, M. Kryza, P. Netzel, M. Wieczorek, M. Kasprzak, P. Migoń, M. Szymanowski, J. Jeziorska, M. Witek, W. Kosek

Experimental approach to verify prognoses of floods using the unmanned aerial vehicle
Małgorzata Witek, Justyna Jeziorska, Tomasz Niedzielski

Forum Bezzałogowych Systemów Latających

Otwock, Poland; 26 March 2013

Unmanned Aerial Vehicle in the HydroProg project in the Department of Geography and Regional Development, University of Wrocław
(Bezzałogowy statek powietrzny w projekcie HydroProg w Instytucie Geografii i Rozwoju Regionalnego Uniwersytetu Wrocławskiego)

Justyna Jeziorska, Tomasz Niedzielski, Małgorzata Witek

Poster presentations	<p>European Geosciences Union General Assembly 2014 (international conference) Vienna, Austria; 27 April - 2 May 2014 <i>Multimodel ensemble predictions of river stages computed in real time: application of the HydroProg system in the upper Nysa Kłodzka basin (SW Poland)</i> <u>Tomasz Niedzielski</u>, B.Miziński, M. Kryza, P. Netzel, M. Wieczorek, M. Kasprzak, P. Migoń, M. Szymański, J. Jeziorska, M. Witek, W. Kosek</p> <p>European Geosciences Union General Assembly 2014 (international conference) Vienna, Austria; 27 April - 2 May 2014 <i>Detection and classification of channel bedforms observed using the visual-light camera mounted to the unmanned aerial vehicle</i> <u>Jacek Ślopek</u>, M. Wieczorek, P. Migoń, M. Kasprzak, J. Jeziorska, M. Witek, W. Spallek, and T. Niedzielski</p> <p>Remote Sensing from Small Unmanned Aerial Systems (international conference) Worcester, Great Britain; 4 July 2013 <i>Can unmanned aerial vehicles enhance performance of hydrologic real-time predictions?</i> <u>Tomasz Niedzielski</u>, Justyna Jeziorska, Matylda Witek</p> <p>European Geosciences Union General Assembly 2013 (international conference) Vienna, Austria; 07 – 12 kwietnia 2013 <i>Unmanned aerial monitoring of fluvial changes in the vicinity of selected gauges of the Local System for Flood Monitoring in Kłodzko County, SW Poland</i> <u>Justyna Jeziorska</u>, Matylda Witek, Tomasz Niedzielski</p>
----------------------	---

OUTREACH INITIATIVES

“Is map a holdover?” – presentation on Geographer’s Day	April 2013
“Christmas Shipwreck” – workshop on GIS Day 2013	Nov 2013
“Unmanned Aerial Vehicle in Department of Geoinformatics” – presentation on GIS Day 2013	Nov 2013
License Agreement with National Geographic Society – distribution and usage in the classroom and educational websites of Polish translation of project “Sailing to buy a wedding dress”	Sep 2013
“Is map a holdover?” – presentation on Prospective Student Event	June 2013
“Diamonds Workshop” – teacher in the Cartography session	March 2013

SKILLS AND OTHER WORK EXPERIENCE

Languages	Fluent in Polish (native), English, and German; proficient in Russian	
Computer and Equipment	ArcGIS, GRASS, Geomedia Professional, Microstation, ERDAS IMAGINE, Agisoft Photoscan, e-mo-tion, Microsoft Office (Word, Excel, PowerPoint, Access), Corel, Adobe Illustrator, OCAD	
Other Work Experience	Live-In Au Pair, Cultural Care Au Pair, Wooster, Ohio	August 2010 to May 2012
	<ul style="list-style-type: none"> – Provide 24-hour care to three young children, including one with special needs. – Use skills with time management, patience, communication, tact, and teamwork to coordinate with parents and children. 	