

Tomáš Václavík (Curriculum Vitae)

Helmholtz Centre for Environmental Research - UFZ
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AREAS OF SPECIALIZATION

- GIScience and Remote Sensing
- Landscape Ecology
- Biogeography
- Species Distribution Modeling
- Biological Invasions
- Land use/Land Cover Change

EDUCATION

- 2007 – 2011 **Ph.D.**, Geography (Applied GIScience), University of North Carolina at Charlotte, Department of Geography and Earth Sciences, Center for Applied Geographic Information Science (CAGIS), Charlotte, NC, USA.
- 2008 **RNDr.**, Ecology and Environmental Sciences, Palacky University, Faculty of Science, Department of Ecology and Environmental Sciences, Olomouc, Czech Republic.
- 2006 – 2007 **Fulbright fellow**, Geographic Information Sciences for Development and Environment (GISDE), Clark University, Department of International Development, Community and Environment (IDCE), Worcester, Massachusetts, USA.
- 2002 – 2005 **Teaching Certificate**, Environmental Education, Palacky University, Faculty of Science, Department of Ecology and Environmental Sciences, Olomouc, Czech Republic.
- 2001 – 2004 **M.Sc.**, Ecology and Environmental Sciences, Palacky University, Faculty of Science, Department of Ecology and Environmental Sciences, Olomouc, Czech Republic.
- 2002 – 2003 **Visiting exchange student**, College of the Atlantic, Bar Harbor, Maine, USA.
- 1998 – 2001 **B.Sc.**, Ecology and Environmental Sciences, Palacky University, Faculty of Science, Department of Ecology and Environmental Sciences, Olomouc, Czech Republic.

RECENT EMPLOYMENT

- 2011 – to date **Assistant Professor**, Palacky University, Faculty of Science, Department of Ecology and Environmental Sciences, Olomouc, Czech Republic.
- 2011 – to date **Postdoctoral Researcher**, Helmholtz Centre for Environmental Research – UFZ, Department of Computational Landscape Ecology, Leipzig, Germany.
- 2007 – 2011 **Research Assistant**, University of North Carolina at Charlotte, Department of Geography and Earth Sciences, Center for Applied Geographic Information Science (CAGIS), Charlotte, NC, USA.
- 2004 – 2007 **GIS analyst**, Agency for Nature Conservation and Landscape Protection of the Czech Republic - Litovelske Pomoravi Protected Landscape Area Administration, Litovel, Czech Republic.

RESEARCH EXPERIENCE

- 2007 – 2011 Research Assistant, invasive species distribution modeling (iSDM). Center for Applied Geographic Information Science (CAGIS), University of North Carolina at Charlotte, NC, USA.

- 2005 – 2007 GIS analyst, GIS and remote sensing for land use/land cover changes. Agency for Nature Conservation and Landscape Protection of the CR and Clark University, MA, USA.
- 2003 Research Assistant, bird colony research on Great Duck Island, Maine, USA. College of the Atlantic, University of California in Berkeley, and Intel Corporation.

TEACHING EXPERIENCE

- 2008 – 2011 Teaching Assistant, Environmental Modeling with GIS, Department of Geography and Earth Sciences, University of North Carolina at Charlotte, NC, USA.
- 2005 – 2006 GIS tutor, Palacky University, Faculty of Science, Department of Ecology and Environmental Sciences, Olomouc, Czech Republic.
- 2000 – 2006 Education programs instructor, Environmental Education Center Slunakov, NGO, Olomouc, Czech Republic.
- 2003 English lecturer, Krkonose National Park Administration, Spindleruv Mlyn, Czech Republic.

PROFESSIONAL ACTIVITIES AND MEMBERSHIPS

- Reviewer for: Ecological Modelling, Biological Invasions, Forest Ecology and Management, Acta Universitatis Carolinae Geographica, Priroda CR, Graduate Student Affinity Group of AAG
- 2010 – to date Member, International Biogeography Society (IBS).
- 2008 – to date Member, United States Regional Association of the International Association for Landscape Ecology (US-IALE).
- 2007 – to date Member, Association of American Geographers (AAG).
- 2007 – to date Member, South Eastern Division of the Association of American Geographers (SEDAAG).
- 2007 – to date Member, Society for Conservation GIS (SCGIS).
- 2000 – 2006 Member, Environmental Education Center Slunakov, NGO, Olomouc, Czech Republic.
- 2002 – 2003 Participant, developing GIS Spatial Analysis training (ESRI Virtual Campus Course), College of the Atlantic and Maine Department of Environmental Protection, Maine, USA.
- 2002 – 2003 GIS consultant and environmental education instructor, MDI Water Quality Coalition, Bar Harbor, Maine, USA.

AWARDS AND HONORS

- 2011 1st Place, Biogeography Specialty Group (BSG) paper competition of the Association of American Geographers (AAG), Seattle, WA, USA.
- 2011 US-IALE Travel Award to present at the 26th Annual Symposium of the US-Regional Association of the International Association for Landscape Ecology, Portland, OR, USA.
- 2010 John Fraser Hart Award, Best Ph.D. Student Paper, SouthEastern Division of the Association of American Geographers (SEDAAG), Birmingham, AL, USA.
- 2010 1st Place, Research Competition Award, 10th Annual Graduate Research Fair – Research Across the Disciplines, Charlotte, NC, USA.
- 2009 John Fraser Hart Award, Best Ph.D. Student Paper, SouthEastern Division of the Association of American Geographers (SEDAAG), Knoxville, TN, USA.
- 2009 Integrated Hardwood Resource Management's Scholarship for the 4th Sudden Oak Death Symposium in Santa Cruz, CA, USA.

- 2009 NASA-MSU Professional Enhancement Award, supported by National Aeronautics and Space Administration (NASA) and Michigan State University (MSU), Center for Systems Integration and Sustainability (CSIS), East Lansing, MI, USA.
- 2008 1st Place, Research Competition Award, 2008 Graduate Research Forum – Niner Research Across the Disciplines, Charlotte, NC, USA.
- 2008 The 1st Annual James O. Wheeler Travel Award, The Catawba Valley Geographical Society, Charlotte, NC, USA.
- 2007 2nd Place, URISA Paper Competition Award, Urban and Regional Information Systems Association, Washington D.C., USA.
- 2006 – 2007 Fulbright Scholarship for Graduate Studies in the U.S., J.W. Fulbright Commission, Bi-national organization for Educational Exchanges with the USA.
- 2006 Study grant, Dagmar and Vaclav Havel VIZE 97 Foundation, Prague, Czech Republic.
- 2004 3rd Place, Gisochar 2004 - Ministry of Environment competition in Geographic Information Systems, Czech Republic.
- 2003 Study grant, American Fund for Czech and Slovak Leadership Studies, New York, USA.
- 2002 – 2003 Merrill Scholarship for one year study at a university in the U.S., study program of Charles Merrill, Palacky University and U.S. partner schools.
- 2001 and 2004 Red Diploma - excellent student results award, Palacky University, Olomouc, Czech Republic.

ADDITIONAL SKILLS

- Computer skills: GIS & RS software (ESRI, IDRISI, ENVI, open source), Windows Office, web design, graphic software, statistical software, Visual Basic for Applications, Python, etc.
- Languages: Czech (mother tongue), English (fluent, TOEFL exam – computer-based score: 300)

REFEREED PUBLICATIONS

- **Vaclavik, T.** & Meentemeyer, R.K. (2012): Equilibrium or not? Modelling potential distribution of invasive species in different stages of invasion. *Diversity and Distributions* 18(1): 73-83.
- **Vaclavik, T.**, Kupfer, J.A., Meentemeyer, R.K. (2012): Accounting for multi-scale spatial autocorrelation improves performance of invasive species distribution modelling (iSDM). *Journal of Biogeography* 39(1): 42-55.
- Vaclavikova, M., **Vaclavik, T.**, Kostkan, V. (2011): Otters vs. fishermen: Stakeholders' perceptions of otter predation and damage compensation in the Czech Republic. *Journal for Nature Conservation* 19(2): 95-102.
- Kovacs, K., **Vaclavik, T.**, Haight, R.G., Pang, A., Cunniffe, N.J., Gilligan, C.A., Meentemeyer, R.K. (2011): Predicting the economic costs and property value losses attributed to sudden oak death damage in California (2010-2020). *Journal of Environmental Management* 92(4): 1292-1302.
- **Vaclavik, T.**, Kanaskie, A., Hansen, E.M., Ohmann, J.L., Meentemeyer, R.K. (2010): Predicting potential and actual distribution of sudden oak death in Oregon: Prioritizing landscape contexts for early detection and eradication of disease outbreaks. *Forest Ecology and Management* 260(6): 1026-1035. (among Science Direct TOP25 Hottest Papers in Forest Ecology and Management in 2010)
- **Vaclavik, T.**, Kanaskie, A., Goheen, E., Ohmann, J., Hansen, E., Meentemeyer, R.K. (2010): Mapping the risk of sudden oak death in Oregon: Prioritizing locations for early detection and eradication. In Frankel, S.J., Kliejunas, J.T., Palmieri, K.M., tech. cords. *Proceedings of the Sudden Oak Death Fourth Science Symposium*. Gen. Tech. Rep. PSW-GTR-229, Albany, CA: Pacific Southwest Research Station, Forest Service, U.S. Department of Agriculture, 126-132.

- Ellis, A.M., **Vaclavik, T.**, Meentemeyer, R.K. (2010): When is connectivity important? A case study of the spatial pattern of sudden oak death. *Oikos* 119(3): 485-493.
- **Vaclavik, T.** & Meentemeyer, R.K. (2009): Invasive species distribution modeling (iSDM): Are absence data and dispersal constraints needed to predict actual distributions? *Ecological Modelling* 220(23): 3248-3258. (2nd among Science Direct TOP25 Hottest Papers in Ecological Modelling in 2009)
- **Vaclavik, T.** & Rogan, J. (2009): Identifying trends in land use/land cover changes in the context of post-socialist transformation in Central Europe: A case study of the greater Olomouc region, Czech Republic. *GIScience & Remote Sensing* 46(1): 54-76.
- **Vaclavik, T.** (2008): Mapping land-use/land-cover change in the Olomouc region, Czech Republic. *URISA Journal* 20(1): 45-51.
- **Vaclavik, T.**, Sarapatka, B., Bednar, M. (2004): The use of pedological data in sustainable modeling, *In: Rohoskova, M. (ed.): Pedodiversity - Pedological Days 2004*. CZU, CPS A GU AV CR: 126-132.

THESES

- **Vaclavik, T.** (2011): Frontiers in Invasive Species Distribution Modeling (iSDM): Assessing effects of absence data, dispersal constraints, stage of invasion and spatial dependence. *PhD Dissertation*. University of North Carolina at Charlotte, Department of Geography and Earth Sciences, 140 p.
- **Vaclavik, T.** (2004): The use of GIS in ecological planning: A case study of Mount Desert Island. *Master's Thesis*. Palacky University, Faculty of Natural Sciences, Department of Ecology and Environmental Sciences, 89 p.
- **Vaclavik, T.** (2001): Landscape degradation due to mining and reclamation activities: A case study of Louky nad Olsi, Czech Republic. *Bachelor's Thesis* (in Czech). Palacky University, Faculty of Natural Sciences, Department of Ecology and Environmental Sciences, 60 p.

CONFERENCE PRESENTATIONS

- **Vaclavik, T.** & Meentemeyer, R.K. (2011): Equilibrium or not? Modelling potential distribution of invasive species in different stages of invasion. *Advances in Biogeography: International Biogeography Society (IBS) Early Career Conference*. Oxford, UK.
- **Vaclavik, T.**, Kupfer, J.A., Meentemeyer, R.K. (2011): Accounting for multi-scale spatial autocorrelation improves performance of invasive species distribution modeling (iSDM). *Annual Meeting of the Association of American Geographers (AAG)*. Seattle, WA, USA.
- Hohl, A., **Vaclavik, T.**, Rizzo, D.M., Meentemeyer, R.K. (2011): Go with the flow: Hydrological connectivity influences the dispersal of an invasive forest pathogen. *Annual Meeting of the Association of American Geographers (AAG)*. Seattle, WA, USA.
- **Vaclavik, T.**, Kupfer, J.A., Meentemeyer, R.K. (2011): Accounting for multi-scale spatial autocorrelation improves performance of invasive species distribution modeling (iSDM). *26th Annual Symposium of the US-Regional Association of the International Association for Landscape Ecology (US-IALE)*. Portland, OR, USA.
- Hohl, A., **Vaclavik, T.**, Rizzo, D.M., Meentemeyer, R.K. (2011): Go with the flow: Hydrological connectivity influences the dispersal of an invasive forest pathogen. *26th Annual Symposium of the US-Regional Association of the International Association for Landscape Ecology (US-IALE)*. Portland, OR, USA.
- **Vaclavik, T.**, Kupfer, J.A., Meentemeyer, R.K. (2010): Accounting for multi-scale spatial autocorrelation improves performance of invasive species distribution modeling (iSDM). *2010 Annual Meeting of the SouthEastern Division of the Association of American Geographers (SEDAAG)*. Birmingham, AL, USA.
- **Vaclavik, T.**, Kanaskie, A., Hansen, E.M., Ohmann, J.L., Meentemeyer, R.K. (2010): Modeling potential vs. actual distribution of sudden oak death in Oregon: Prioritizing landscape contexts for early detection

and eradication of disease outbreaks. 25th Annual Symposium of the US-Regional Association of the International Association for Landscape Ecology (US-IALE). Athens, GA, USA.

- Hohl, A., Rizzo, D.M., **Vaclavik, T.**, Meentemeyer, R.K. (2010): Stream baiting of *Phytophthora ramorum* for early detection of sudden oak death: Modeling forest disease spread in California at watershed level. 25th Annual Symposium of the US-Regional Association of the International Association for Landscape Ecology (US-IALE). Athens, GA, USA.
- **Vaclavik, T.**, Kanaskie, A., Hansen, E.M., Ohmann, J.L., Meentemeyer, R.K. (2010): Predicting potential and actual distribution of sudden oak death in Oregon: Prioritizing landscape contexts for early detection and eradication of disease outbreaks. 10th Annual Graduate Research Fair – Research across the Disciplines. Charlotte, NC, USA.
- **Vaclavik, T.** & Meentemeyer, R.K. (2009): Invasive species distribution modeling (iSDM): Do we need absence data and dispersal constraints for accurate predictions? 2009 Annual Meeting of the SouthEastern Division of the Association of American Geographers (SEDAAG). Knoxville, TN, USA.
- **Vaclavik, T.** & Vaclavikova, M. (2009): Using GIS and remote sensing for land use/land cover change (LULCC) detection in the context of post-socialist transformation in Central Europe. European IALE Conference. Salzburg, Austria.
- **Vaclavik, T.**, Kanaskie, A., Goheen, E., Ohmann, J., Hansen, E., Meentemeyer, R.K. (2009): Mapping the risk of sudden oak death in Oregon: Prioritizing locations for early detection and eradication. 4th Sudden Oak Death Science Symposium. Santa Cruz, CA, USA.
- **Vaclavik, T.** & Meentemeyer, R.K. (2009): Spatial prediction of biological invasions: Effect of using presence/absence vs. presence-only data on model performance. 24th Annual Symposium of the US-Regional Association of the International Association for Landscape Ecology (US-IALE). Snowbird, UT, USA.
- **Vaclavik, T.** & Meentemeyer, R.K. (2009): Spatial prediction of biological invasions: Effect of using presence/absence vs. presence-only data on model performance. Annual Meeting of the Association of American Geographers (AAG). Las Vegas, NE, USA.
- Ellis, A.M., **Vaclavik, T.**, Meentemeyer, R.K. (2008): Accounting for effective connectivity in spatially explicit disease models. 2008 Annual Meeting of the SouthEastern Division of the Association of American Geographers (SEDAAG). Greensboro, NC, USA.
- Ellis, A.M., **Vaclavik, T.**, Meentemeyer, R.K. (2008): Incorporating effects of spatial heterogeneity into infectious disease models. 93rd Ecological Society of America Annual Meeting, Milwaukee, WI, USA.
- **Vaclavik, T.** & Ortega, M. (2008): Species distribution modeling: A comparative assessment of Mahalanobis Typicality and Ecological Niche Factor Analysis. 2008 Meeting of the Association of American Geographers. Boston, MA, USA.
- **Vaclavik, T.** & Ortega, M. (2008): Modeling potential distribution of Norway Maple in Massachusetts. 23rd Annual Symposium of the US-Regional Association of the International Association for Landscape Ecology (US-IALE). Madison, WI, USA.
- Meentemeyer, R.K. & **Vaclavik, T.** (2008): Landscape pathology of emerging forest diseases: Concepts and applications. 2008 Annual Meeting of the Plant Pathology Society of North Carolina. Charlotte, NC, USA.
- **Vaclavik, T.** & Meentemeyer, R.K. (2008): Predicting invasion probability of Sudden Oak Death disease in California. 2008 Graduate Research Forum – Niner Research Across the Disciplines. Charlotte, NC, USA.
- **Vaclavik, T.** (2007): Land use/land cover changes in the context of postsocialist transformation in Eastern Europe. 2007 Annual Meeting of the SouthEastern Division of the Association of American Geographers (SEDAAG). Charleston, SC, USA.

- **Vaclavik, T.** (2007): Identifying trends in land use/land cover changes in the Olomouc region, Czech Republic. The 45th Annual Conference of the Urban and Regional Information Systems Association (URISA). Washington DC, USA.
- Neeti, N., **Vaclavik, T.** & Niphadkar, M. (2007): Predictive Distribution Modeling with LCM (Potential Distribution of Japanese Knotweed (*Polygonum cuspidatum*) in Massachusetts). ESRI user's conference. San Diego, USA.
- **Vaclavik, T.** (2007): Identifying land cover change in the Olomouc region, Czech Republic. Graduate Student Multidisciplinary Conference. Clark University, Worcester, MA, USA.