

PARIWATE VARNAKOVIDA

Director of KMUTT Geospatial Engineering and InnOvation Center (KGEO)
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BIOGRAPHY

2013-Present | Director of KMUTT Geospatial Engineering and InnOvation Center (KGEO), King Mongkut's University of Technology Thonburi

2012-2013 | Lecturer

Faculty of Technology and Environment, Prince Songkla University, Thailand.

2009-2012 | Assistant Professor

School of Physical Sciences, College of Natural and Mathematical Sciences,
Lake Superior State University, USA.

2003-2009 | Scientist

Center for Global Change and Earth Observations, Michigan State University, USA.

EDUCATION

2003-2009 | Ph.D.

Department of Geography, Michigan State University-East Lansing, Michigan

Specialty in GIScience, GIS, Remote Sensing, Computer Simulation, Artificial Intelligent, Urban and Environmental Models, Environmental Studies, Climate Change, Sustainable Development and Land use/Land cover Changes

2006-2007 | Doctoral Specialization

Environmental Science and Policy, Michigan State University- Michigan, USA

The Specialization provides students with an understanding of the diverse disciplines brought to bear on contemporary environmental problems. The program was designed to provide an understanding of how various disciplines conceptualize environmental issues and how scientific information can be brought to bear on environmental decision-making and environmental policy.

2002-2003 | Lifelong Education

Michigan State University- Michigan, USA

Partially sponsored by *Community Volunteers for International Programs (CVIP)* scholarship

1999-2002 | M.S.

Technology of Information System Management, major in Information System Management on Environments and Natural Resources, Mahidol University – Bangkok, Thailand

Thesis: A Self-study computer program for Teacher (Grade 7) on The Topic of Biological Diversity

1995-1999 | B.Sc

Major in Mathematics, Minor in Computer and Business Administration, Chiangmai University, Chiangmai, Thailand

Project: Applying Matrix Algebra to Genetics

INSTRUCTOR

Introduction to Geographic Information Systems, People and Environment, Physical Geography, Climate Change and mitigation, Introduction to GIS and GPS, Intermediate GIS, GIS database and web applications, GIS programming, Geospatial Analysis, Spatial statistics, Advance Spatial Analysis and Statistics, Remote Sensing, Digital Image Processing, and Environmental Science Lab

RESEARCH ASSISTANT

Fall 2005-2009 | Medical Geography

Project "Evaluating Michigan's Community Hospital Access: A Comparison of Spatial Methods for Decision Support" funded by the State of Michigan's Department of Community Health, supervised by Dr. Joseph P. Messina.

Spring 2007-2009 | GIScience

NSF project "Exploring the Social Dynamics of Accessibility, Travel Behavior, and Physical Activity by Income/Race, Age and Gender: An Inner-City/Suburb Comparison in the Detroit Region", supervised by Dr. Igor Vojnovic

Summer 2008 | GIScience

Crime Mapping for the Battle Creek Evaluation Project. The project aims to improve educational and economic outcomes in Battle Creek, Michigan by mobilizing low-income communities and resident leaders and building their capacity to influence the decisions and policies that impact their lives, Under Psychology Department funded by the W. K. Kellogg Foundation.

Spring 2009 | GIScience

Optimization of Cost and Network Analysis of Delivery Routes for Dairy Product: A Case Study of St. Paul, Minnesota. MSU Product Center for Agriculture and Natural Resources.

PUBLICATIONS

- 1) Vojnovic, I. Podagrosi, A. Kotval, Z. Lee, J. Varnakovid, P. Messina, J. Physical Activity, Obesity and the Urban-built Environment: A Lansing, Michigan Context. *Environment and Planning B*
- 2) Varnakovid, P. Messina, J., Shortridge, A., Vojnovic, I. Ritchie, B. and Qi, J. (Under review). Mixed Land Use and Sustainable Urbanization in Nang Rong, Thailand. *Journal of Environmental Research Letters*.
- 3) Vojnovic, I. Lee, J. Kotval, Z. Podagrosi, A. Varnakovid, P. Ledoux, T. Messina, J. 2012. The Burdens of Place: A Socio-economic and Ethnic/Racial Exploration into Urban Form,

Accessibility and Travel Behavior in the Lansing Capital Region, Michigan. *Journal of Urban Design*.

- 4) Varnakovid, P. and Messina, J.P. 2012. Sustainability, Economic Development, and Agricultural Towns in Thailand: The Case Study of Nang Rong [Book chapter]. *Sustainability: A Global Urban Context*, I. Vojnovic, ed. Michigan State University Press.
- 5) Ecosystem Status of the St. Marys River and Hydrologic Considerations for Restoration (Manuscript)
- 6) Varnakovid, P., Messina, J., and Vojnovic, I. 2011. Transportation Development: Agent-Based Modeling and Landscape Prediction of Urban Environment. ESRI International User Conference Proceeding. San Diego, CA
- 7) Varnakovid, P. and Lawawirojwong, S. 2007. Wetland Restoration Land Cover Changes Analysis Using Remote Sensing, GIS, and Landscape Metrics. *Journal of Remote Sensing and GIS Association of Thailand (RESGAT)*. Vol. 8 No. 3 September-December.
- 8) Varnakovid, P., Wiangwang, N., Messina, J.P., and Qi, J. 2007. Predictive Modeling of Lake Nitrogen, Phosphorus and Sediment Concentrations Based on Land Use/Land Cover Type and Pattern. *Wetland and Water Resource Modeling and Assessment: a Watershed Perspective*. Ed. Wei Ji, CRC Press. P: 141-152
- 9) Messina, J., Shortridge, A., Groop, R., Varnakovid, P., and Finn, M. 2006. Evaluating Michigan's community hospital access: spatial methods for decision support. *International Journal of Health Geographics*, 5:42 (22 Sep 2006). "Highly accessed"
- 10) Hupy, J.P., Aldrich, S., Schaetzl, R.J., Varnakovid, P., Arima, E., Bookout, J., Wiangwang, N., Campos, A., and K. McKnight. 2005. Mapping Soils, Vegetation, and Landforms: An Integrative Physical Geography Field Experience. *The Professional Geographer*, Vol. 57, Number 3, P: 438-451.
- 11) Varnakovid, P. and J.P. Messina. 2005. Critical Thresholds and Sensitivity Dynamics of Percolation. *Proceedings of Geocomputation 2005*.
<http://www.geocomputation.org/2005/index.html>
- 12) Varnakovid, P., Wiangwang, N., Messina, J.P. 2005. Simulation of Lake Nitrogen, Phosphorus and Sediment Levels Based on Land Use/Land Cover Type and Pattern. *Geoscience and Remote Sensing Symposium proceeding. IGARSS '05. IEEE International. Volume 7, 25-29 July 2005 P: 4545 – 4548*.
- 13) Malmstrom, C.M. and H.S. Butterfield with C.P. Barber, S.A. Bradenburg, C.C. Hughes, J. Qi, T. Robinson, A. Schrotenboer, C. Stoner, P. Varnakovid, and T. Yoshida. 2004. Using remote sensing to assess forage dynamics in a California rangeland restoration program. *CalFed Bay Delta Authority Final Report 79 p*.
- 14) Messina, J., Shortridge, A., Groop, R., Varnakovid, P. 2004. Hospital Site Selection Project: The Case Study of Michigan. Report in response to a request from the Michigan Department of Community Health as part of an on-going effort by the technical committee responsible for site selection for the state of Michigan.

- 15) Varnakovid, P. and Messina, J., P. 2004. Urban Modeling and Landscape Prediction: The Case Study of Nang Rong, Thailand. Applied Geography Conference Proceeding, (Montz, B.E. and Tobin, G.A., editors), 27:239-246.

PROFESSIONAL EXPERIENCES

- 1) Crime Mapping for the Battle Creek Evaluation Project under Psychology Department funded by the W. K. Kellogg Foundation. 2008.
- 2) Modeling Networks and Evolution of Complex Systems: This course provides an introduction to building models of complex systems (physical, biological, social and engineering), networks architectures and evolutionary processes. New England Complex Systems Institute (NECSI), MIT, Cambridge MA, 2007.
- 3) Log Linear Models for Indirect Population Estimation (Capture- Recapture): introduction and demonstration of how to use log linear models in the capture/recapture setting to estimate population size. Co-sponsored by CSTAT, the office of the Vice President for Research and Graduate Studies and the Michigan State University Graduate School, summer 2006.
- 4) Geospatial Technology Workshop by Remote Sensing & GIS Research and Outreach Services Michigan State University 2005.
- 5) Land Cover/Use Modeling in Michigan Workshop by Remote Sensing & GIS Research and Outreach Services Michigan State University 2005. Key speaker is Keith Clarke.
- 6) Field Assistant for Muskegon River Watershed Assessment Project. Using Analytical Spectrum Device, collecting secchi depth, and sampling water quality. CGCEO, Michigan State University 2004.
- 7) GIS/Remote Sensing Technician in Plant Biology Department, Michigan State University. Under the Audubon-California Willow Slough Rangeland Stewardship Program supported by the CALFED Ecosystem Restoration Program 2004.
- 8) Hospital Site Selection Project: The Case Study of Michigan. Report in response to a request from the Michigan Department of Community Health as part of an on-going effort by the technical committee responsible for site selection for the state of Michigan 2004.
- 9) Arc/Info lab instructor for GEO425: Geographic Information System class. Website: <http://www.msu.edu/~varnakov/geo425/>. 2003.
- 10) Remote Sensing and GIS Technician support at Center for Global Change and Earth Observation (CGCEO) (BSRSI), Michigan State University. Editing and correcting database, vector editing, building thematic maps, map composition, image co-registration using ERDAS and ARC/INFO in Unix and WindowNT environment, maintaining TRIFIC website 2002-2003.
- 11) Mathematics Tutor for Spartan Athlete Center, Michigan State University 2002.

- 12) Arc/Info 8 short course training at ESRI, Thailand 2000.
- 13) Remote sensing fieldwork experience with graduate students from the Department of Geography, Michigan State University: the forest type interpretation and ground truth in Chiangmai in August 2000, with Ms. Cuizhen Wang and the water tropic status monitoring field sample, with Ms. Narumon Wiangwang.
- 14) Sustainable Development in Tourism: A Case Study at Chang Island, Thailand. Geographic Information System (GIS) was used to find the suitable sites for waste disposal. GIS was combined with the Database of Chang Island facilities for an appropriate management of land use. Remote sensing data was also used to monitor Land use/ Land cover changes of the area 2000. (Project Manager)
- 15) Landfill Selection Sites at Nakornpathom, Thailand 1999.

ACADEMICS PRESENTATIONS

- 1) Sommers, K. (Advised by Varnakovid, P.), 2011. Temporal and Spatial Analysis of Gravid Female Painted Turtles (*Chrysemys picta*) in their Northern Habitat Range.' Michigan Academy of Science, Arts, and Letters 2011 at Saginaw Valley State University.
- 2) Throop J. and Varnakovid P. 2011. Phragmites Australis in the Grand Traverse Bay. ESRI International User Conference. San Diego, CA
- 3) Varnakovid, P., Messina, J., and Vojnovic, I. 2011. Transportation Development: Agent-Based Modeling and Landscape Prediction of Urban Environment. ESRI International User Conference Proceeding. San Diego, CA
- 4) Vojnovic, I., Lee, J., Kotval, Z. Podagrosi, A., Smith, S., Frask, G., Varnakovid, P., Messina, J. Pigozzi, B., and J. Darden. 2010. Travel Behavior and the Urban-built Environment: The Lansing Michigan Context. AAG, Washington D.C. (USA).
- 5) Vojnovic, I., Ye, M., Lee, J., Varnakovid, P., Messina, J., Velie, E., Thomas, J., Pothokuchi, K., Pigozzi, B., Darden, J., and D. Griffith. 2010. The Social Dynamics of Accessibility and Travel Behavior in the Detroit Region. AAG, Washington D.C. (USA).
- 6) LaLonde, T., Shortridge, A., Messina, J., and Varnakovid, P. 2008. The Relationship of Shuttle Radar Topography Mission (SRTM) Error to Landscape Characteristics [Presentation]. Association of American Geographers Annual Meeting. Boston, USA.
- 7) Varnakovid, P., Messina, J., and Vojnovic, I. 2008. Sustainable Development and self-sufficiency: The case study of urban and rural of Thailand [Presentation]. Association of American Geographers Annual Meeting. Boston, USA.
- 8) Vojnovic, I., Podagrosi, A., Smith, S., Kotval, Z., Varnakovid, P., Lee, J., Frask, G., Messina, J., Pigozzi, B., and J. Darden (Michigan State University, The Governor's Council on Physical Fitness, Health, and Sports; and Blue Cross-Blue Shield Association), 2008. Physical Activity, Obesity and the Urban-built Environment: A Lansing, Michigan Context [Poster]. Association of American Geographers Annual Meeting. Boston, USA.

- 9) Vojnovic, I., Kotval, Z., Lee, J., Varnakovid, P., Smith, S., Frask, G., Messina, J., Velie, E., Thomas, J., Pothokuchi, K., Pigozzi, B., Darden J., and D. Griffith (Michigan State University), 2008. Accessibility, Travel Behavior, and Physical Activity in the Detroit Region [Poster]. Association of American Geographers Annual Meeting. Boston, USA.
- 10) Vojnovic, I., Podagrosi, A., Varnakovid, P., Messina, J., Smith, S., Kotval, Z., Pigozzi, B., Darden, J., and J. Lee. 2007. The Urban Built Environment, Travel behavior, and Physical activity: A Lansing, Michigan context [Presentation]. AAG Eastlake regional conference.
- 11) Vojnovic, I., Messina, J., Smith, S., Kotval, Z., Varnakovid, P., Lee, J., Velie, E., Thomas, J., Pothokuchi, K., Pigozzi, B., Darden, J. and D. Griffith. 2007. The Social Dynamics of Accessibility, Travel Behavior, and Physical Activity: An Inner-City/Suburb Comparison in the Detroit Region [Poster]. AAG Eastlake regional conference.
- 12) Vojnovic, I., Varnakovid, P., Podagrosi, A. Messina, J., Smith, S., Kotval, Z., Pigozzi, B., Darden, J., and J. Lee. 2007. The Relationship between Obesity and Urban-built Environment: The Analysis of Physical Activity and Travel Behavior [Poster]. National Council for Science and the Environment (NCSE) meeting 2007: Integrating Environment and Human Health. Washington, DC.
- 13) Varnakovid, P., Barker, T., Grose, D. L. 2007. Global Warming Modeling and Networks (Presentation). New England Complex Systems Institute (NECSI), MIT, Cambridge MA.
- 14) Varnakovid, P. 2007. Thailand and Thai people under the umbrella of Buddhism (Presentation). Travelogue Talk Series, Geography Department, Michigan State University.
- 15) Varnakovid, P, Finn, M., and J. Messina. 2007. Hospital cluster evaluation: correlation between travel time and hospital visits for the state of Michigan [Poster]. AAG Eastlake regional conference.
- 16) Wangwang, N. Varnakovid, P., Qi, J., and Messina, P. 2007. Hyperspectral Data of Water Quality Parameters Spectral Analysis: Area under Spectral Curve Indicator [Presentation]. ASPRS, Ottawa, Canada.
- 17) Messina, J., Shortridge, A., Groop, R., Finn, M., Varnakovid, P., Mcknight, K. Applications of GIS - A Primer. Disparities Workshop: Geographic Information Systems. Institute for Health Care Studies [75 minute presentation]. Michigan State University.
- 18) Varnakovid, P. and Aldrich, S. 2006. Complex Coupled Human and Natural Systems: Land Use/Land Cover Change in Southeast Asia [Presentation]. Michigan State University.
- 19) Varnakovid, P., Messina, J., Shortridge, A., and Groop, R. 2006. Evaluating Michigan's community hospital access: travel time analysis for decision support [Presentation]. The Association of American Geographers Annual Meeting. Chicago, USA.
- 20) Varnakovid, P., Messina, J., Shortridge, A., and Groop, R. 2006. Evaluating Michigan's community hospital access: travel time analysis for decision support [Poster]. Michigan Land Use Summit Planning for Prosperity.

- 21) Varnakovidá, P. and Messina, J. 2006. Characterizing landscape and urban area of Nang Rong, Thailand using Cellular Automata [Poster]. A Decade of Global Change Research in Thailand and Policy Panel Discussion on planning for changes for the next decade. Thailand.
- 22) Varnakovidá, P. and Messina, J. 2006. Evaluating Michigan's communities' hospital, surgical hospital, and Magnetic resonance Therapy (MRT) accesses: a travel time analysis [Presentation]. IMAGIN Conference. Traverse City, USA.
- 23) Varnakovidá, P. and Messina, J. 2006. Urban Modeling and Landscape Prediction Using Satellite imagery and GIS applications: The Case Study of Nang Rong, Thailand [Poster]. Science, Engineering, and Technology Day. Michigan State University.
- 24) Varnakovidá, P., Schmitt, K., Novitski, L., Aquino, F., and Arin S. 2006. Forest Stewardship Council (FSC) Chemical Pesticide Policy a Review (Presentation). Michigan State University.
- 25) Varnakovidá, P., Witchakool, S., and Mohamed, A. 2006. Multiple Spatial Logistic Regression Analysis of Settlement Locations in Nang Rong, Thailand [Presentation]. Michigan State University.
- 26) Vojnovic, I., Podagrosi, A., Varnakovidá, P., Messina, J., Smith, S., Kotval, Z., Pigozzi, B., Darden, J., Governor's Council on Physical Fitness, Health, and Sports, and Blue Cross-Blue Shield Association. 2006. Building Communities to Promote Physical Activity: Exploring the Lansing Capital Region [Poster]. Association of American Geographers Annual Meeting. Chicago, USA.
- 27) Vojnovic, I., Podagrosi, A., Varnakovidá, P., Messina, J., Smith, S., Kotval, Z., Pigozzi, B., Darden, J., Governor's Council on Physical Fitness, Health, and Sports, and Blue Cross-Blue Shield Association. 2006. Building Communities to Promote Physical Activity: Exploring the Lansing Capital Region [Poster]. Michigan Land Use Summit Planning for Prosperity.
- 28) Wiangwang, N., Qi, J., and Varnakovidá, P. 2006. Assessment of Hyperspectral Data for Water Quality Studies in Michigan's Inland Lakes [Poster]. IMAGIN Conference. Traverse City, USA.
- 29) Varnakovidá, P., Wiangwang, N., and Messina, J. 2005. Predictive Modeling of Lake Nitrogen, Phosphorus and Sediment Concentrations Based on Land Use/Land Cover Type and Pattern [Presentation]. The International Conference on Poyang Lake Complex Environment System and Advanced Workshop on Watershed Modeling and Water Resources Management. Nanchang, China.
- 30) Vojnovic, I., Podagrosi, A., Varnakovidá, P., Messina, J., Pigozzi, B., Darden, J., Smith, S. 2005. Accessibility, Non-motorized Travel, and Obesity by Income, Race, Age, and Gender: An Inner-city/Suburb Comparison in The Lansing Region [Poster]. Michigan Land use Summit. Lansing, USA.
- 31) Vojnovic, I., Podagrosi, A., Varnakovidá, P., Messina, J., Smith, S., Pigozzi, B., Darden, J., Governor's Council on Physical Fitness, Health, and Sports, and Blue Cross-Blue Shield Association. 2005. Comparing accessibility and travel behavior in the Lansing Capital Region [Poster]. AAG East Lake Conference.

- 32) Varnakovid, P. 2005. Land cover change in wetland restoration area: The Case Study of South of Campus Michigan State University [Presentation]. IMAGIN Conference, Detroit, USA.
- 33) Varnakovid, P. and Messina, J. 2005. Critical Thresholds and Sensitivity Dynamics of Percolation [Presentation]. GeoComputation Conference. Ann Arbor, USA.
- 34) Varnakovid, P., and Messina, J. 2005. Hospital Selection sites [Presentation]. The IMAGIN Student Poster and Paper Competition for Presenting in Conference in 2006.
- 35) Varnakovid, P. and Messina, J. 2005. Urban Growth Characteristics and Modeling: the Case Study of Nang Rong, Thailand [Illustrated Paper]. Association of American Geographers Annual Meeting. Denver, USA.
- 36) Varnakovid, P., and Messina, J. 2005. Urban Modeling and Landscape Prediction Using Cellular Automata: The Case Study of Nang Rong, Thailand [Poster]. International Education Week. Sponsored by the dean's office in International Studies and Programs and Graduate School. Michigan State University.
- 37) Varnakovid, P., Wiangwang, N., and Messina, J. 2005. Simulation of Lake Nitrogen, Phosphorus and Sediment Levels Based on Land Use/Land Cover Type and Pattern. The Geoscience and Remote Sensing Society (IGARSS) Annual Conference. Seoul, South Korea.
- 38) Messina, J.P., Delamater, P., and Varnakovid, P. 2004. Deviation from Neutral: Measuring Landscape Change over Space and Time [Presentation]. "Abstract submitted to and accepted by the Modeling Land Use and Land Cover Dynamics sessions through the Geographic Information Science and Land Use and Land Cover Change Commissions."
- 39) Varnakovid, P. 2004. The Important of GIS and how to establish the GIS network to improve efficiency of land use management for Burirum, Thailand [Presentation]. Presented at Municipal office, Burirum, Thailand.
- 40) Varnakovid, P. 2004. Urban Landscape Fieldwork and GIS Data Collecting: the Study Site of Nangrong, Thailand [Presentation]. Presented at North Carolina Population Center, USA.
- 41) Varnakovid, P. and Cain, A. 2004. Public Housing Area Planning for River Rouge, Michigan [Presentation]. Presented to a group of local mayors and city managers. Under the Michigan Suburbs Alliance (MSA) project. Michigan State University.
- 42) Varnakovid, P. and Messina, J. 2004. Urban Modeling and Landscape Prediction: The Case Study of Nangrong, Thailand [Presentation]. Applied Geography Conference. St. Louis, USA.
- 43) Varnakovid, P. and Wiangwang, N. 2004. Sustainable way of waste management for Burirum, Thailand [Presentation]. Presented at Municipal office, Burirum, Thailand.
- 44) Varnakovid, P., Messina, J.P., Walsh, S.J., and Welsh, W.F. 2004. Urban Modeling and Landscape Prediction: The Case Study of Nangrong, Thailand [Poster]. Association of American Geographers Annual Meeting. Philadelphia, USA.

- 45) Wiangwang, N. and Varnikovida, P. 2004. Water Quality Prediction using LU/LC & Digital Terrain in the Muskegon River Watershed [Presentation]. IMAGIN Conference.
- 46) Varnakoida, P. and Messina, J. 2003. Historical Landscape Prediction: The Case Study of Nangrong, Thailand [Poster]. Association of American Geographers East Lake Conference.
- 47) Varnakovida, P. and Wiangwang, N. 2003. Non-point source water pollution assessment in the Muskegon river watershed using terrain analysis and quality of DEM [Presentation]. Michigan State University.
- 48) Samek, J., Skole, D., Qi, J., and SEARRIN. 2002. Fractional cover mapping Beyond Discrete Classification toward Mapping Forest Quality [Poster]. Engineer and Technology day. Michigan State University 2002.
- 49) Varnakovida, P. and Kodandapani, N. 2002. Forest Fires and Tropical Ecosystems: Understanding Spatial and Temporal Patterns: The Mundumalai Wildlife Sanctuary, India [Presentation]. IMAGIN Conference.

AWARDS AND SCHOLARSHIPS

- 1) 6-months grant/scholarship by the Austrian Federal Ministry of Science for the academic year 2013/2014
- 2) Grant by Department of Water Resource on " Water Management on Lumpradong Stream Network and Community Conservation" 2013/2014
- 3) Fully funded to participate in the "2012 Training Workshop on Urban Spatial Planning in Response to Climate Change in Asia" by National Taipei University
- 4) Fully-funded grant from the Great Lakes Restoration Initiative funds for "Linkages between tributaries and Whitefish Bay and their significance for lake whitefish management" project (2011-2012)
- 5) Co-Principal Investigator (co-PI) on the "Biological Status of the St. Mary's River and Hydrologic Options for Restoration" project, funded by the International Upper Great Lakes Study (IUGLS) (2010)
- 6) Dissertation Completion Fellowship Fall 2008. Michigan State University.
- 7) GTU/ Thomas Fund in support of participation in the AAG meeting in Boston 2008.
- 8) ESPP travel grant to the National Council for Science and the Environment (NCSE) meeting 2007.
- 9) ESPP partial scholarships for Winter School courses on complex systems concepts and methods 2007. MIT.

- 10) New England Complex Systems Institute (NESCI) partial scholarships for Winter School courses on complex systems concepts and methods 2007. MIT.
- 11) Building Communities to Promote Physical Activity: Exploring the Lansing Capital Region Vojnovic, A. Podagrosi, P. Varnakovida, J. Messina, S. Smith, Z. Kotval, B. Pigozzi, J. Darden, Governor's Council on Physical Fitness, Health, and Sports, and Blue Cross-Blue Shield Association [Poster]. 2006
- 12) Michigan Land Use Summit Planning for Prosperity. Faculty Best poster Award.
- 13) Graduate Office Fellowship (GOF), Michigan State University 2006.
- 14) GTU/Thomas Fund in support of participation in the AAG meeting in Chicago 2006.
- 15) Nominated for the Graduate Student Leader Award in the 5th Annual Student Life Leadership Awards 2006.
- 16) Travel fund to attend AAG meeting 2006. Sponsored by The College of Social Sciences. Michigan State University 2006.
- 17) Travel fund to attend AAG meeting 2006. Sponsored by The Graduate School Michigan State University 2006.
- 18) Research Assistantship under the project Evaluating Michigan's community hospital access: a comparison of spatial methods for decision support funded by a multi-organization committee headed by the State of Michigan's Department of Community Health 2005.
- 19) Second Place Paper Competition: Hospital Selection sites. The IMAGIN Student Poster and Paper Competition for Presenting in Conference in 2006. Presented in 2005.
- 20) Second Place Paper Competition: Land cover change in wetland restoration area: The Case Study of South of Campus Michigan State University. IMAGIN Conference 2005.
- 21) Travel fund to attend a professional meeting. Sponsored by The College of Social Sciences. Michigan State University 2005.
- 22) Travel fund to attend a professional meeting. Sponsored by The Department of Geography Michigan State University 2005.
- 23) Travel fund to attend a professional meeting. Sponsored by The Environmental Science & Policy Program (ESPP), Michigan State University 2005.
- 24) Travel fund to attend a professional meeting. Sponsored by The Graduate School Michigan State University 2005.
- 25) Travel fund to attend a professional meeting. Sponsored by The International Studies and Programs, International Center, Michigan State University 2005.
- 26) Jim Living Scholarship, sponsored by Woolpert, LLP in recognition of outstanding student scholarship in Geographic Information / Geospatial Sciences & participation in the IMAGIN Organization 2004.

- 27) Graduate Office Fellowship award (GOF) Michigan State University 2004.
- 28) Second Place Analytical Presentation: Water Quality Prediction using LU/LC & Digital Terrain in the Muskegon River Watershed. IMAGIN Conference, Map gallery competition. Narumon Wiangwang and Pariwate Varnikovida 2004.
- 29) Teaching assistantship for Geographic Information System, Advanced Remote Sensing, and Economic Geography. Geography Department, Michigan State University, East Lansing, MI since spring 2003 - 2005.
- 30) Community Volunteers for International Programs (CVIP) scholarship, sponsored by Office of International Student and Scholar, MSU. Fall 2002.
- 31) Environmental and Sustainable Resources Management studies trip in Germany, Sponsored by German government, sponsored through Mahidol University 2000.
- 32) Exchange student scholarship, St. Maries High school, Idaho U.S.A. 1994- 1995.

MEMBERSHIPS

- 1) Association of American Geographers (AAG)
- 2) Gamma Theta Upsilon (GTU), Alpha Sigma Chapter.
- 3) The American Society for Photogrammetry and Remote Sensing (ASPRS)
- 4) The Institute of Electrical and Electronics Engineers (IEEE)
- 5) Improving Michigan's Access to Geographic Information Networks (IMAGIN)
- 6) T Sigma Xi, The Scientific Research Society

SKILLS

Visual basic, COBOL, C programming, Arcview, ArcInfo, ArcGIS, ArcIMS, Arcpad, ERDAS, ENVI, IDL, STELLA, PYTHON, Author ware, SPSS, SYSTAT, R statistic, Internet, HTML, Adobe, AutoCAD, Windows2000, UNIX environment and Microsoft utility.

LANGUAGES

Fluent in English. Native in Thai.

REFERENCES

Joseph P. Messina Associate Professor

Department of Geography
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Michigan State University
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235 Geography Building
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Jiaguo Qi Professor of Geography

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