YONGWAN CHUN
School of Economic, Political and Policy Sciences
The University of Texas at Dallas
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Educational History

- PhD, August 26, 2007, The Ohio State University, Columbus, Ohio, Geography
  Dissertation Title: "Behavioral specifications of network autocorrelation in migration modeling: An analysis of migration flows by spatial filtering"
- MAS, March 19, 2006, The Ohio State University, Columbus, Ohio, Statistics
- MA, February 26, 2002, Seoul National University, Seoul, Korea, Geography Education
- BA, August 30, 1996, Seoul National University, Seoul, Korea, Geography Education

Professional Experience

- Assistant Professor, School of Economic, Political and Policy Sciences, The University of Texas at Dallas, Richardson, Texas (2009-present)
- Clinical Assistant Professor, School of Economic, Political and Policy Sciences, The University of Texas at Dallas, Richardson, Texas (2008-2009)
- Postdoctoral Research Fellow, School of Economic, Political and Policy Sciences, The University of Texas at Dallas, Richardson, Texas (2007-2008)
- Teaching/Research Assistant, Department of Geography; Center for Mapping, The Ohio State University, Columbus, Ohio (2002-2007)
- Academic Administration Assistant, Department of Geography Education, Seoul National University, South Korea (2001-2002)
- GIS Analyst/Engineer, Department of Technical Support, ESRI Korea Inc., Seoul, Korea (1997-2001)

Research Interests

- Geographic Information System
- Geocomputation
- Geovisualization
- Spatial statistics and spatial econometrics
- Spatial interaction models
- Urban issues including crime and public health

Professional Memberships

- The Association of American Geographers
- The Regional Science Association International
- Gamma Theta Upsilon: The International Geographic Honor Society

Awards and Fellowships

- EPPS Outstanding Teaching Comet Award, 2012-2013, School of Economic, Political and Policy Sciences, The University of Texas at Dallas.
- First place, the Graduate Student Paper Competition, Spatial Analysis and Modeling Specialty Group, 2008, The 104th Annual Meeting of the Association of American Geographers, Boston, MA, April 19
- Invited participant with travel grant, 2008, Student Forum on Science and Technology Policy sponsored by National Academies, Washington, DC, January 4-5
- Recipient of the Summer Research Fund, 2007, Department of Geography, The Ohio State University, Columbus, Ohio

Achievements in Original Achievement, Investigation, and Research

- Journal articles

  2013, Kim, H., Y. Chun, and K. Kim, Delimitation of functional regions using p-regions problem approach, *International Regional Science Review*, (In press).

  2013, Kim, Y., W. Zhong, and Y. Chun, Modeling sanction choices on fraudulent exchanges of public benefits, *Journal of Artificial Societies and Social Simulation*, 16(2), 8, (http://jasss.soc.surrey.ac.uk/16/2/8.html).

  2013, Griffith, D. A., Y. Chun, M. E. O'Kelly, B. J. L. Berry, R. P. Haining, and M.-P. Kwan, Geographical Analysis: the first forty years, *Geographical Analysis*, 45(1), pp. 1-27.

  2012, Chun, Y., H. Kim, and C. Kim, Modeling interregional commodity flows with incorporating network autocorrelation in spatial interaction model: An application of the U.S. interstate commodity flows, *Computers, Environment and Urban Systems*, 36(6), pp. 583-591.

  2012, Chun, Y., Y. Kim, and H. Campbell, Using Bayesian methods to control for spatial autocorrelation in environmental justice research: An illustration using toxics release inventory data for a Sunbelt county, *Journal of Urban Affairs*, 34(4), pp. 419-439.

  2012, Kim, C., S. Sang, Y. Chun, and W. Lee, Exploring urban commuting imbalance by jobs and gender, *Applied Geography*, 32(2), pp. 532-545.

  2011, Chun, Y. and D. A. Griffith, Modeling network autocorrelation in space-time migration flow data: An eigenvector spatial filtering approach, *Annals of the Association of American Geographers*, 101(3), pp. 523-536.

  2010, Qiu, F., H. Sridharan, and Y. Chun, Spatial autoregressive model for population estimation at the census block level using LIDAR-derived building volume information, *Cartography and Geographic Information Science*, 37(3), pp. 239-257.

  2009, Liu, D. and Y. Chun, The effects of different classification models on error propagations in land cover change detection, *International Journal of Remote Sensing*, 30(20), pp. 5345-5364.

  2009, Xiao, N. and Y. Chun, Visualizing migration flows using Kriskograms, *Cartography and Geographic Information Science,* 36(2), pp. 183-191.

2008, Chun, Y., Modeling network autocorrelation within migration flows by eigenvector spatial filtering, *Journal of Geographical Systems*, 10(4), pp. 317-344.

2008, Chun, Y. and Y. Park, Neighborhood effects and spatial patterns in urban crime: A case study of the City of Dallas, Texas, *Journal of the Korean Urban Geographical Society*, 11(1), pp. 85-99.

2007, Chun, Y, A Bayesian approach to spatial interaction model with spatial random effects for origins and destinations: A case of internal migration within the city of Seoul, *Journal of the Korean Urban Geographical Society*, 10(1), pp. 103-114.

2004, Chun, Y., The pattern of migration in Seoul, South Korea during 1995-2002, *Journal of Geography Education*, Seoul National University Press: Seoul, South Korea, 48, pp. 87-99.

- Conference proceedings

2012, Chun, Y. and D. A. Griffith, On the quality of eigenvector spatial filtering based parameter estimates for the normal probability model: implications about uncertainty and specification error for georeferenced data, In Proceedings of *the 10th International Symposium on Spatial Accuracy Assessment in Natural Resources and Environment Sciences*, pp. 1-6.

2008, Liu, D and Y. Chun, Simulation analysis of error propagation on land cover change maps: A comparison of contextual and non-contextual models, In *Proceedings of the 8th International Symposium on Spatial Accuracy Assessment in Natural Resources and Environment Sciences*, pp. 405-411.

2005, Chun, Y., R. Bivand, and M. Tiefelsdorf, Using open source data analysis environments for prototyping modeling implementations for spatial data: Weights in R, In *Proceedings of the 8th International Conference on GeoComputation*, 21 pages.

- Invited talks/presentations/workshop

2012, "GIS methodologies in the U.S. environment impact statement process," Korea Environment Institute, Seoul, Korea, December 17, 2012.

2012, "An introduction to spatial statistical methods in regional science," A workshop at The 59th Annual North American Meetings of the Regional Science Association International, Ottawa, Cananda, November 07 (Griffith and Chun).

2012, "Spatial statistics for spatial accuracy research," A workshop at the The 10th International Symposium on Spatial Accuracy Assessment in Natural Resources and Enviromental Sciences, Florianópolis, SC, Brazil, July 10 (Griffith and Chun).

2011, "Understanding spatial autocorrelation," A workshop at Korea Research Institute for Human Settlements (KRIHS), Anyang, Gyeonggi, Korea, May 26 (Griffith and Chun).

2011, "Understanding spatial autocorrelation," A workshop at Department of Geography Education, Seoul National University, Seoul, Korea, May 25 (Griffith and Chun).

2008, "Spatial filtering workshop" sponsored by *National Science Foundation*, School of Economic, Political and Policy Sciences, The University of Texas at Dallas, Richardson, TX, June 16-20.

2008, "Network autocorrelation in migration flows", Department of Geography and Planning, The University of Akron, Akron, OH, February 22.

2008, "Modeling spatial dependencies with and in inter-regional flows: A spatail filtering approach", Department of Civil, Architectural and Environmental Engineering, The University of Texas at Austin, Austin, Texas, February 8 (Griffith, Tiefelsdorf, and Chun).

2007, "A spatial filtering approach in modeling network autocorrelation among migration flows", School of Economic, Political and Policy Sciences, The University of Texas at Dallas, Richardson, Texas, July 2.

2007, "Analyzing Spatial Data with R" (by Bivand), A workshop at the 103rd Annual Meeting of the Association of American Geographer, San Fanciscro, California, April 17 (Lab assistant).

2001, "Introduction to GIS", The Institute of the Study of Educational Administration, Seoul National University, South Korea, August.

- Papers presented at professional meetings

    2013, "Statistical Consistency of Eigenvector Spatial Filter Estimators," The 109th Annual Meeting of the Association of American Geographers, Los Angeles, CA, April 13 (Sinha, P., M. Lee, Y. Chun, and D. A. Griffith).

    2013, "Location Optimization for Detecting p Functional Spatial Clusters," The 109th Annual Meeting of the Association of American Geographers, Los Angeles, CA, April 13 (Kim, K., H. Kim, and Y. Chun).

    2013, "An examination of traffic accidents," The 109th Annual Meeting of the Association of American Geographers, Los Angeles, CA, April 09 (Kim, C., Y. Chun, and H. Kim).

    2012, "Geographical flows decomposition: a comparative analysis," The 59th Annual North American Meetings of the Regional Science Association International, Ottawa, Canada, November 09 (Chun and Griffith).

    2012, "A heuristic approach for delineating functional regions," The 59th Annual North American Meetings of the Regional Science Association International, Ottawa, Canada, November 08 (Kim, K., Y. Chun, and H. Kim).

    2012, "On the quality of eigenvector spatial filtering based parameter estimates for the normal probability model: implications about uncertainty and specification error for georeferenced data," The 10th International Symposium on Spatial Accuracy Assessment in Natural Resources and Environmental Sciences, Florianópolis, SC, Brazil, July 10-13 (Chun and Griffith).

    2012, "Exploring modifiable areal unit problem using the eigenvector spatial filtering," The 108th Annual Meeting of the Association of American Geographers, New York, NY, February 27.

    2012, "Developing a heuristic algorithm for a p-functional region problem," The 108th Annual Meeting of the Association of American Geographers, New York, NY, February 26 (Kim, K., H. Kim, and Y. Chun).

    2011, "Some Noteworthy Equivalencies between Spatial Autoregressive and Eigenfunction Spatial Filter Model Specifications," The 58th Annual North American Meetings of the

Regional Science Association International, Miami, Florida, November 10 (Chun and Griffith).

2011, "Districting functional regions using geographical flows," The 58th Annual North American Meetings of the Regional Science Association International, Miami, Florida, November 10 (Kim, H., Y. Chun, and K. Kim).

2011, "Spatial differences in urban commuting by race and occupation", The 107th Annual Meeting of the Association of American Geographers, Seattle, WA, April 15 (Kim, C, Y. Chun, and S. Sang).

2011, "Analyzing space-time crime incidents using eigenvector spatial filtering: an application of vehicle burglary in the city of Plano, Texas," The 107th Annual Meeting of the Association of American Geographers, Seattle, WA, April 13.

2010, "Environmental inequalities in a Sunbelt county: A Bayesian spatial analysis", The 57th Annual North American Meetings of the Regional Science Association International, Denver, Colorado, November 12 (Chun, Y., Y. Kim, and H. Campbell).

2010, "Network Reliability and Resiliency of Rapid Transit Systems: A Case Study of the Transit System in the Greater Metropolitan Area of Washington D.C.", The 57th Annual North American Meetings of the Regional Science Association International, Denver, Colorado, November 11 (Kim, H., C. Kim, and Y. Chun).

2010, "Network autocorrelation in modeling commodity flows of the U.S.", The 106th Annual Meeting of the Association of American Geographers, Washington, DC, April 16 (Kim, C., Y. Chun, and H. Kim)

2010, "Network autocorrelation in modeling commodity flows of the U.S.", The 106th Annual Meeting of the Association of American Geographers, Washington, DC, April 16 (Kim, C., Y. Chun, and H. Kim)

2010, "Population estimation from a three dimensional perspective", The 106th Annual Meeting of the Association of American Geographers, Washington, DC, April 16 (Sridharan, Qiu, and Chun)

2010, "Crime scene locations in case of criminal homicide: Spatial crime analysis in a GIS environment", The 106th Annual Meeting of the Association of American Geographers, Washington, DC, April 15 (Kim, H., C. Anderson, and Y. Chun)

2009, "Modeling traffic accident counts based on network links: a panel data analysis", The 56th Annual North American Meetings of the Regional Science Association International, San Francisco, California, November 20 (Kim, C., Y. Chun, and H. Kim).

2009, "From Data to Action: Evaluating Simulation Data in Agent-Based Models", North American Association for Computational Social and Organization Sciences (NAACSOS), Tempe, Arizona, October 24 (Kim, Y., and Y. Chun).

2009, "The Interplay of Certainty, Severity, and Celerity in Punishment for Wrongdoing: Fraud Control in Public Service Delivery", The 10th Public Management Research Association Conference, Columbus, Ohio, October 03 (Kim, Y., W. Zhong, and Y. Chun).

2009, "Modeling network autocorrelation in space-time panel data: An eigenvector spatial filtering approach", The 105th Annual Meeting of the Association of American Geographers, Las Vegas, Nevada, March 26 (Chun and Griffith).

2009, "Eigenvector selection with stepwise regression techniques to construct spatial filters", The 105th Annual Meeting of the Association of American Geographers, Las Vegas, Nevada, March 25 (Griffith and Chun).

2009, "An examination of network autocorrelation on urban traffic volume", The 105th Annual Meeting of the Association of American Geographers, Las Vegas, Nevada, March 25 (Kim, C. and Y. Chun).

2008, "The p-values of Local Moran's I_i to explore spatial patterns", The 55th Annual North American Meetings of the Regional Science Association International, New York, New York, November 21 (Chun and Tiefelsdorf).

2008, "Eigenvector selection with stepwise regression techniques to construct spatial filters", The 55th Annual North American Meetings of the Regional Science Association International, New York, New York, November 21 (Griffith and Chun).

2008, "Simulation analysis of error propagation on land cover change maps: a comparison of contextual and non-contextual models", The 8th International Symposium on Spatial Accuracy Assessment in Natural Resources and Environmental Science, Shanghai, China, June 25 (Liu and Chun).

2008, "Spatial filtering of bladder cancer mortalities by Poisson regression", The 104th Annual Meeting of the Association of American Geographers, Boston, Massachusetts, April 17 (Madrid, Chun, and Tiefelsdorf).

2008, "Modeling network autocorrelation within migration flows by spatial eigenvectors", The 104th Annual Meeting of the Association of American Geographers, Boston, Massachusetts, April 17.

2007, "Modeling network autocorrelation among migration flows by spatial eigenvector filtering", The 103rd Annual Meeting of the Association of American Geographers, San Francisco, California, April 21.

2006, "Estimating Auto-Poisson regression models by spatial eigenvector filtering", The 102nd Annual Meeting of the Association of American Geographers, Chicago, Illinois, March 11, In an organized session on "Perspectives on Spatial Data Analysis: A Session in Honor of Arthur Getis" (Chun and Tiefelsdorf).

2005, "Using open source data analysis environments for prototyping spatial modeling implementations in R", The 8th International Conference on GeoComputation, Ann Arbor, Michigan, August 02 (Chun, Bivand, and Tiefelsdorf).

2005, "Spatial filtering by eigenvectors in iteratively re-weighted regression models", The101[st] Annual Meeting of the Association of American Geographers, Denver, Colorado, April 9 (Chun and Tiefelsdorf).

2004, "Local effects of misspecifications in spatial interaction models", The 100th Annual Meeting of the Association of American Geographers, Pennsylvania March (Tiefelsdorf and Chun).

2003, "Analyzing the spatial pattern of crime in Seoul, South Korea", The 99th Annual Meeting of the Association of American Geographers, New Orleans, Louisiana, March.

- Book reviews

2009, Chun, Y., A joint review of *Encyclopedia of Geographic Information Science* (K. Kemp ed., 2008, Los Angeles: SAGE Publications), and *Encyclopedia of GIS* (S. Shekar and H. Hong eds., 2008, New York: Springer), *Annals of the Association of American Geographers*, 99(3), pp. 635-636.

Professional and University Citizenship

- Professional activities and committees
  - Editorial Assistant, *Geographical Analysis*, 2008 – present
  - Editorial Board member, Journal of Korean Cartographic Association, 2013 – present.
  - Elected Board member, Spatial Analysis and Modeling Specialty Group, Association of American Geographers, 2012 – present.
  - Organizing Committee, The 2nd conference on Spatial Statistics, June 4–7, 2013.
  - Paper reviews:
    Annals of the Association of American Geographers, Annals of Operations Research, Cartography and Geographic Information Science, Computers & Geosicences, Computers, Environment and Urban Systems, IEEE Transactions on Geoscience and Remote Sensing, International Journal of Applied Geospatial Research, International Journal of Health Geographics, Journal of Geographical Systems, Journal of Korean Cartographic Association, Journal of the Korean Urban Geographical Society, Journal of Transport Geography, GIScience & Remote Sensing, Stochastic Environmental Research and Risk Assessment, Transactions in GIS, Transportaion Research Part E: Logistics and Transportation Review, Urban Geography.
- University Service
  - Advisor, Geographic Information Science Student Organization (2010 - present)
  - Coordinator, Graduate Certificate Programs for Geographic Information System (2013 – present)
  - PhD dissertation graduate school representative (2010)

- Courses and other curricula taught at The University of Texas at Dallas
  - The University of Texas at Dallas
    GISC 2301: Introduction to Geographic Information Systems (Fall 2011; Spring 2012)
    GISC 6326: Geovisualization (Fall 2009, 2011–2013)
    GISC 6379: Special Topics: Geovisualization (Fall 2007)
    GISC 6381: Geographic Information Systems Fundamentals (Fall 2012–2013; Spring 2013)
    GISC 6382: Applied Geographic Information Systems (Fall 2012)
    GISC 6387: Geographic Information Systems Workshop (Summer 2013)
    GISC 6388: GIS Application Software Development (Spring 2008–2013)
    GISC 7361: Spatial Statistics (Fall 2008)
    GISC 7363: Internet Mapping and Information Processing (Fall 2010)
  - The Ohio State University
    Geog 200: World Regional Geography (TA)
    Geog 580: Elements of Cartography (lab instructor)
    Geog 687: Design and Implementation of Geographic Information Systems (lab instructor)
    Geog 883.01: Application of Quantitative Methods in Geography I (lab instructor)
    Geog 883.02: Application of Quantitative Methods in Geography II (lab instructor)