



NARSC NEWS



Welcome from the Executive Director



It is with great pleasure that I welcome you to the first issue of the NARSC newsletter. The main goal of the newsletter is to provide what you will hopefully find is interesting news and information regarding people, events, and initiatives within the North American Regional Science community. The newsletter will be published biannually (June and December) and will be disseminated electronically to regional scientists throughout the world.

The newsletter editors are Elizabeth Mack of Arizona State University and Ralph McLaughlin of San Jose State University. Thanks to Liz and Ralph for agreeing to take on this task.

I assumed the position of NARSC Executive Director on January 1, 2013, taking over from Jean-Claude Thill who had served in that position since 2005. It would be remiss of me if I did not take this opportunity to thank Jean-Claude for his eight years of dedicated service to North American Regional Science. Jean-Claude was a tireless worker on behalf of NARSC and there is no question that our organization prospered under his wise and judicious leadership. I have no doubt that RSAI will similarly benefit from his leadership over the next few years.

NARSC's 2013 conference will be held in Atlanta, Georgia, November 13-16. This will be our 60th annual meeting and promises to be one of our largest ever. The deadline for abstract submissions (July 1) is fast approaching. Please consider joining us. More information about the conference can be found on the NARSC website - <http://www.narsc.org/newsite/>. I look forward to seeing you there.

I hope that you enjoy this inaugural newsletter. If you have any comments on this issue or suggestions for the content of future issues please contact either Liz Mack (eamack1@asu.edu) or Ralph McLaughlin (ralph.mclaughlin@sjsu.edu). If you have any questions or comments regarding NARSC more generally please contact me at neil.reid@utoledo.edu. My inbox is always open.

Neil Reid, NARSC Executive Director

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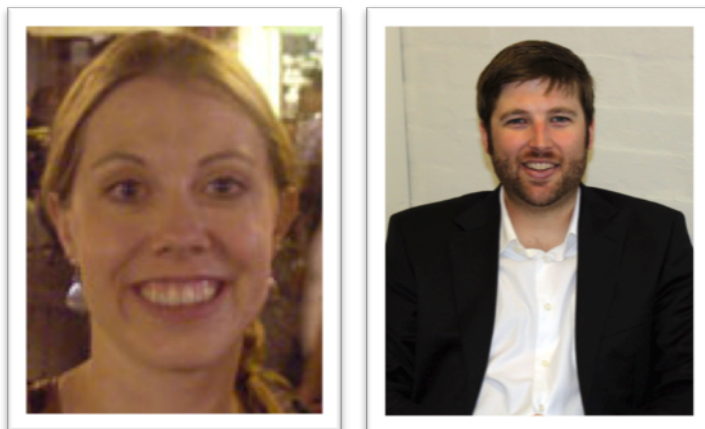
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*Would you like to contribute to the newsletter?
Contact editors Elizabeth Mack
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(ralph.mclaughlin@sjsu.edu)*

A Word from the Editors



Welcome to the inaugural NARSC Newsletter! We are delighted to bring a new forum that will disseminate information and discussion pertaining to the North American Regional Science Association. The goal of this newsletter is threefold: 1. highlight scholarly achievements in the North American Regional Science Community; 2. foster connections between members of the North American Regional Science Community; and 3. serve as a venue for scholarly debate about current issues in regional science.

This edition of the newsletter highlights the work and perspectives of scholars in the Southern Regional Science Association (SRSA), which is the host of this year's annual meeting in Atlanta, Georgia. Featured items of this edition include a piece about regional economic development in the Southeast United States from Douglas Woodward, the President of NARSC, as well as three thought pieces from Nancy White, David Boyce and Randy Jackson regarding the state of the regional science discipline. In addition to these featured pieces, the newsletter also profiles the work of junior faculty members in the Southern Regional Science Association, Shaoming Cheng and Christa Court, and the funding accomplishments of our members. A heartfelt thank you goes out to each of you that took the time to write pieces for the newsletter.

As editors, our goal is to provide the NARSC membership with fresh insights and themes in each edition. In this regard, any feedback, comments or suggestions you have about this edition of the newsletter or future editions are greatly appreciated.

Elizabeth Mack and Ralph McLaughlin
Newsletter Co-Editors



The development of automobile manufacturing in the American Southeast and China by Douglas Woodward

I am looking forward to the NARSC meetings this November in Atlanta, Georgia. Atlanta is the economic and business hub of the southeastern United States. It is an interesting city to visit, not just because of its historical significance, but because of the cultural influence of the Southeast.

The unique southern culture is known across the world, most notably through its popular and pervasive music: rock, blues, and soul. Then there's southern country music, which I have heard playing far from my South Carolina home--in places like Lusaka, Zambia and Xian, China. Southern food and drink is even more ubiquitous than southern music. For better or worse, Southern fried chicken is just about everywhere. The Atlanta-based Coca-Cola Company sells more than a billion soft-drink servings a day, in almost every city, town, and village on earth.

In this inaugural NARSC newsletter, I have been asked to discuss some current research on regional economic development in the Southeast. At the Moore School of Business at the University of South Carolina, we are conducting a comparative analysis of regional competitiveness in the

Southeast and Northeastern China. This comparison between such distant places might seem strange at first, but when you consider what it is happening in 21st century manufacturing, it makes sense. The broad region around Atlanta has recently experienced a manufacturing revival, especially in automotive production. Since 1980, an auto cluster has taken firm root across Alabama, Georgia, Tennessee, Kentucky, and the Carolinas. While U.S. automotive employment shrunk by eight percent from 1980-2011, jobs in the Southeast surged by 107%.¹ Since the depth of the Great Recession, the Southeastern states have posted some of the strongest gains.

China's Northeast region (Manchuria) is also going through an industrial renaissance. Investment and job creation in the automotive sector is booming in the provinces of Liaoning and Jilin. To date, we have found that the manufacturing revival in both regions has been led by foreign-owned companies. To take one example, BMW has recently made substantial investments in both South Carolina and Shenyang, China, adding thousands of jobs. BMW and other foreign companies are attracted to the large market of both countries (China is the world's number one car market, having surpassed the United States in 2011). As regional science would predict, large markets and agglomeration economies allow for efficient and specialized suppliers to form around assemblers. This is what we have found to be taking place in both regions. We are analyzing local industrial linkages through input-output analysis and other regional science tools. Our focus is on local supply chain/logistics development and long-run sustainability. We are assessing the relative competitive advantages of automotive manufacturing in terms of regional attributes like infrastructure, labor quality, technology, and the business climate (including incentives and regional government cooperation).



"As regional science would predict, large markets and agglomeration economies allow for efficient and specialized suppliers to form around assemblers."

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The popular image of Chinese sweatshops making labor-intensive goods for export does not apply to the Northeastern automotive cluster. Chinese automotive manufacturing appears to be rapidly moving up the value chain. Labor productivity is increasing dramatically and wages are rising. In many ways, the Northeast China automotive cluster is deeper and more sophisticated than the assembler and supplier base of the Southeastern United States.

In conducting our study, we are partnering with regional scientists in China, where there is tremendous interest in the academic research of our Association. I am pleased that our work is continually relevant and, like Southern culture, is spreading across the world. I am eager to learn about your current research during our annual conference in Atlanta.

I hope to see you there!

Doug Woodward is the Director of Division of Research and Professor of Economics at the Darla Moore School of Business at the University of South Carolina. He earned his Ph.D. in Economics at the University of Texas in 1986. His career-long interest in regional science was inspired, in part, by observations during a bicycle trip from New York to San Francisco as an undergraduate in the summer of 1975. Professor Woodward's primary research interests today are industrial location, agglomeration economies, regional economic cluster development, and foreign direct investment. He has published widely on these topics in academic journals, including the Journal of Urban Economics, the Journal of Regional Science, Regional Science and Urban Economics, the Journal of Economic Geography, and the Review of Economics and Statistics. Recently published papers have investigated labor matching, knowledge spillovers, and agglomeration economies. A forthcoming paper addresses creative clustering through an analysis of independent inventor location in U.S. regions. In 2013, Woodward is examining regional cluster development in Northeast China as the Governor Hodges Research Fellow in the Darla Moore School of Business. Over his career, Woodward has received numerous grants; from the National Science Foundation, the U.S. Department of Energy, the U.S. Department of Education, and many others. He has testified before local, state, and national government committees and has often appeared in the media discussing economic development and related topics. Currently, Professor Woodward serves as the President of NARSC. He is Associate Editor of the Journal of Regional Science and the Review of Regional Studies. From 2010-2011 he was President of the Southern Regional Science Association.



Fifty Years at the North American Regional Science Meetings

By David Boyce

I attended my first Meetings of the Regional Science Association in November 1964 at the University of Michigan in Ann Arbor. At the time I was a graduate student focused on my thesis research, and working full time on the side to support my expanding family. Through careful planning, and extraordinary good luck, I have not missed the North American Meetings since. If my luck continues to hold, I will attend my 50th consecutive North American Meetings next November in Atlanta.

I have wondered out loud to a few people what I might do to commemorate this event. The likely answer is nothing unusual: give a 20-minute talk, and say hello to the many colleagues I have met over the years, whose friendship I cherish. This invitation to write a few lines for the first newsletter of the North American Regional Science Council presents an unexpected opportunity to say more on this occasion that may interest younger readers, as well as remind some of my contemporaries about the meetings back then.

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What were the Regional Science Meetings like in 1964? To begin, you need to understand that all of the papers were invited by Professor Walter Isard, the founder of the Association, and its long-time Honorary Chairman, who actually ran the show. Each year, Walter invited fourteen leading scholars, some old and well established, some young and upcoming, to present papers. Just to be sure that I can rely on my memory, I reached into my archival set of newsletters of the Regional Science Association, and took volume XV of the *Papers of the RSA* from my bookshelf. The Tentative Program contained 15 papers, plus the Presidential Address. Of these, 12 were published in the *Papers*. Moreover, six papers were presented by recent Ph.D.s at Early-Bird and Late-Bird Sessions at 8 am and 8 pm.

There were no parallel sessions. All of the participants, perhaps 100 in number, sat in a large room to hear the presentation of two papers in a three hour session. Each speaker had about 30 minutes to present his paper. (There were no women presenters in those days, and rarely any women in the audience.) Each paper had two discussants, whose remarks were heard next, followed by extensive discussion from the floor. The discussion was generally lively, and the audience listened carefully to the questions and the responses from the speakers. At the end of the three-hour session, including a brief coffee break, the Meetings adjourned to lunch or dinner. On the first day, Saturday, there were three sessions: morning, afternoon and night. On Sunday, there were two sessions plus the Presidential Address at an evening banquet. In 1964, there was a morning session on Monday morning, which was unusual. More typically, the Meetings began on Friday and ended on Sunday afternoon.

A session after Saturday lunch featured reports from university regional science programs and majors, which included programs in economics, geography, urban planning and urban studies. A business meeting open to all participants was held after Sunday lunch. There were also two musical events: a classical music session organized by Edgar Hoover, and a jazz session organized by Walter Isard on the piano and Ben Stevens on bass.

Most of the papers presented at the Meetings were published in the *Papers of the RSA*. Occasionally, someone would not offer their paper for publication, in order to submit it to a journal, if they felt they could do so without antagonizing the Honorary Chairman. The editor of the *Papers* also sought to identify outstanding Ph.D. papers, which he then offered to publish.

This pattern continued from the first Meetings in 1954 until 1974. At that point, the pressure from participants to present papers became so great that contributed papers were solicited and scheduled in parallel sessions. However, some papers continued to be "invited" in order to encourage senior scholars, who expected such an invitation, to participate. Those invited papers were scheduled in separate sessions from the contributed papers. Otherwise, the Meetings continued much as before, but with more sessions, and an increased number of participants. The registration fee was kept as low as possible and covered only coffee breaks (with no snacks). To attend the Presidential Address on the second evening of the Meetings, one was encouraged to buy a dinner ticket; participants who could not afford the dinner, also known as graduate students, were invited to enter the room after dinner had been completed to hear the Address.

The location of the Meetings was decided in a meeting of the RSA Council, and was a much anticipated announcement, at least for some. The locations were chosen to support new academic programs in regional science, which provided for attendance by graduate students, who would occupy otherwise empty seats in the large meeting room. Another concern was to keep travel costs to a minimum, requiring the Meetings to be held on the East Coast and Midwest close to the main academic centers.

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In 1969 the Meetings were held in the Far West for the first time, and then in 1973 in the South; only in 1976 were the Meetings held in Canada. In the late 1960s, the Meetings were extended to a full day on Friday, but sessions continued to be scheduled for Sunday past 1990. At that time, much lower air fares were available for travel with a Saturday night stay, so the Sunday sessions were accepted as a practical matter.

In 1988 at Toronto, the North American Regional Science Council was formed to organize the North American Meetings. Until then, the North American Meetings had been organized by the headquarters office of the Association, first by Walter Isard and an assistant, then beginning in 1969 with my collaboration as RSA Secretary, and then from 1977 to 1989 by myself and a committee of individuals who organized groups of sessions on specific topics such as facility location, input-output analysis, transportation, regional economics, etc. In 1989, representatives of the five North American Regional Science organizations met at Santa Barbara to adopt the procedures so successfully followed to this day in organizing the North American Regional Science Meetings. Having each organization take its turn once every five years in hosting and organizing the Meetings has been a remarkably effective arrangement.

I would like to take this opportunity to thank each of those program chairs and local arrangement chairs who have performed these tasks effectively and efficiently beginning in 1990. Finally, without the support of a series of NARSC Executive Directors, their efforts would not have been nearly as successful as we have witnessed during this 24-year period.

David Boyce has served as a faculty member at the University of Pennsylvania (1966-1977), the University of Illinois at Urbana-Champaign (1977-1988), and the University of Illinois at Chicago (1988-2003). He is a Fellow of the Regional Science Association International (2002), the Institute for Operations Research and the Management Sciences (2003), and the American Society of Civil Engineers (2009), and is an Emeritus Member of the Transportation Networks Committee of the Transportation Research Board. He has published over 190 journal articles, books, book chapters and reports.



Editorial: The State of Regional Science

By Nancy White

It is a daunting task to offer an opinion on the state of regional science in 500 words for the inaugural NARSC newsletter, especially from someone who, after many years of attending regional science conferences, awoke to the relevance and enormity of this discipline we call regional science. The topic of paramount interest in my first graduate urban and regional course was whether people followed jobs or jobs followed people as we sought to

explain the shift of the U.S. population to the west and south and the transition of the U.S. economy from manufacturing and agriculture to services. Then, along came the new economic geography, the world is flat, GIS, and clusters. I will not attempt to make predictions about what is before us.

Regional science enjoys an advantage over some fields of inquiry, in that the world we live in calls for understanding and analysis that is interdisciplinary. We have the theoretical and empirical tools to explain contemporary sub-national, national, and international issues.

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Our journals demonstrate that our scope and methods are adaptable to change yet not overtaken by popular trends. Our professional conferences are attended by active mature scholars and enthusiastic, well-trained young colleagues. Spatial econometrics has transformed some of our research and we have become more cautious in the application of well-known methods that no longer serve us well. We continue our teaching and research of traditional regional science topics such as firm and household location decisions, and regional development. In recent years, we have invited more interdisciplinary partners to the big tent.

Legal and environmental studies inform regional science research as natural resource extraction, especially shale energy, has attracted the attention of regional scientists. Because shale resources are typically extracted from rural locations, existing disciplinary linkages are strengthened amongst agricultural, environmental, and resource economics, rural sociology, local public finance, and local and regional economic development.

The contribution of regional science to policy associated with natural resources, climate change, and immigration, to name a few, is in the formative stages of development. As a practical matter, policy relevant research does not necessarily lead to informed public policy. This is an area where we have an opportunity to improve. To be useful, we might seek the attention of policymakers and exercise our ability to translate the results of our research into a language that is understood by non-specialists. While this may be an ill-fated recommendation for academicians without tenure, it presents a set of opportunities for those of us who do not face these hurdles. In my own personal interactions with policymakers interested in shale energy topics, the issues that are the domain of regional science are generally secondary to the environmental concerns of the citizenry they represent. The latter observation suggests that on energy issues, regional science collaboration with the natural sciences and engineering presents fruitful avenues for research. It also yields a platform for inserting our perspective into policy discussions. If we do not find methods of asserting our approaches into public policy, policy will continue to develop without it.

Nancy White is presently the Charles P. Vaughan Chair in Economics at Bucknell University. She has served as president of the SRSA and is currently a NARSC councilor, as well as a member of the editorial board of The Review of Regional Studies. Currently her research focuses on household migration in addition to her other research interests in urban and regional economic development, amenity markets, and public finance.



Editorial: The State of Regional Science

by Randall W. Jackson

What constitutes long-lasting knowledge? What converts discovery into knowledge that truly makes a difference? As scientists we accept the value of knowledge for knowledge's sake, and indeed, any knowledge can be long lasting. But the surest way for knowledge to make a difference – *to really matter* – is to demonstrate its relevance, which happens most often and most effectively

in application. Knowledge that finds application is quickly tested, and when it is applied usefully and for a benefit, its importance is confirmed and its potential for impact enhanced. Much of what we discover in regional science could and should find immediate and effective application, but it somehow seldom does. There is a great well of untapped potential for transforming regional science

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discovery into long-lasting knowledge that matters, but that potential lies largely unrealized because most of us stop short of transferring our knowledge from limited academic research circles to broader societal spheres of influence. This is not just unfortunate for the state of regional science, but also for the welfare of the individuals, regions and even global systems that stand to benefit.

Making a Difference, and Making Regional Science Matter

Latent knowledge will not likely matter much until it does emerge. Among notable recent examples is Alfred Marshall's knowledge of industry clusters and agglomeration economies that lay dormant for roughly a century before being shown to matter as a result of conscious efforts to move it beyond the boundaries of academia to the arena of policy and practical applications. No matter your view of industry clusters, this knowledge has now made a difference.

The numbers and kinds of options for disseminating knowledge have never been greater. From Twitter and Facebook, through LinkedIn and blogs, to policy white papers in popular press and academic journals, voices are being heard. If our voices are among them, the state of regional science will grow stronger and its future bright.

Regional science knowledge lends itself naturally to topics of the day. Opportunities to matter abound, including of course and especially, government-funded regional economic development programs. For regional scientists in the U.S., the current Administration's recognition of the role of regions in the national economy is striking. As one example, and despite contrary calls from the Cato Institute and the Heritage Foundation to eliminate the Economic Development Administration (EDA), the current administration has invested in the EDA Regional Innovation Program (EDA RIP), proposing in 2012

\$40 million for EDA's Regional Innovation Program, a collaborative effort with HUD and USDA, which will support a nationwide competition to encourage 20 communities 'Growth Zones' to develop and implement regional strategic plans.

For its part that year, the U.S. Department of Agriculture's (USDA) proposed

... a Regional Innovation Initiative that works through existing programs to fund regional pilot projects, strategic planning activities, and other investments to improve rural economies on a regional basis. USDA would target up to 5 percent of the funding within 10 existing programs, approximately \$171 million in loans and grants, and allocate these funds competitively among regional pilot projects tailored to local needs and opportunities.

And from Housing and Urban Development in as early as October of 2010:

For the first time ever, the U.S. Department of Housing and Urban Development (HUD) is awarding nearly \$100 million in new grants to support more livable and sustainable communities across the country. HUD Secretary Shaun Donovan today announced that 45 regional areas will receive funding through a new initiative intended to build economic competitiveness...

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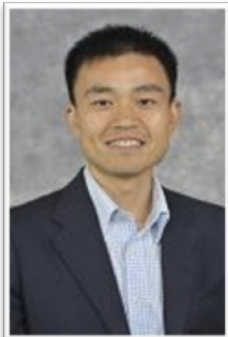
The government is now not only recognizing, but also emphasizing the importance of regional development to the national economy. Many new programs have dominant regional dimensions, including the i6Challenge, the America Competes Act, and the billion-dollar network of 15 U.S. Innovation Institutes program. This was announced in February, and proposed that by leveraging “the strengths of a *particular region*, each institute will bring together businesses, universities and community colleges, and government...” (EDANews email newsletter, May 7, 2013, emphasis added).

Examples of regional science relevance are evident elsewhere around the globe, including governmental support for IO and CGE approaches to estimating carbon footprints to the EU’s substantial investment in the construction of global multiregional input-output databases to support economic and environmental applications.

It Matters...

There has never been a better opportunity to make regional science research relevant. Those of us whose research bears on the success or failure of regional development programs can choose not to produce knowledge for the latency store, but to reach instead beyond our borders to the policy arena where the use of knowledge matters, and where what we do can make a difference. And if we do, the state of regional science will be strong.

Randy Jackson is a Professor of Geology and Geography and Director of the Regional Research Institute (RRI) at West Virginia University (WVU). In February of this year, Jackson was named the Benedum Distinguished Scholar at WVU for his career achievements. Jackson is also a prior president (2011) of the SRSA.



Member Profile: Shaoming Cheng, Assistant Professor Florida International University

I am currently working with two FIU colleagues in the Department of Public Administration on a NSF-funded project in collaboration with the University of Illinois at Urbana-Champaign. This project focuses on economic recovery and resilience after natural disasters particularly in rural areas in comparison to their urban counterparts. Built upon the quasi-experimental design and applications in regional science, this line of research will construct matched control groups for natural disaster affected counties, measure disaster recovery speed and quality through the counterfactuals, and uncover determinants affecting the speed and quality of disaster recovery and economic resilience. In addition, my current research also examines the determinants of new firm formation/closure and their economic development impacts in the United States with a specific emphasis on unique endowments, challenges and opportunities within and across jurisdictions that were generally ignored in prior literature. This line of research has been supported by the FIU Kauffman Professor program, which is sponsored by the Ewing Marion Kauffman Foundation.

Previous Work

I worked with colleagues from the Regional Research Institute at West Virginia University and from the School of Public Policy at George Mason University on two research projects respectively funded by the U.S. Department of Agriculture and by the U.S. Economic Development Administration. The

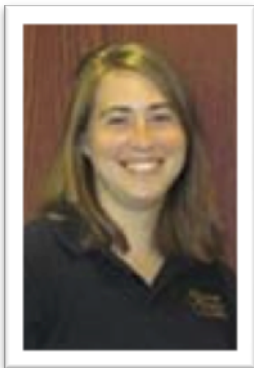
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USDA-funded research dealt with education and outreach integrated urban areas. The project produces a set of new and expanded tools and instruments for evaluating the performance of rural business incubators, and demonstrates the importance of business incubation for entrepreneurship fostering and rural economic development. The EDA-funded research focuses on the “piecemeal, incomplete, and accidental” regional innovation measurement, and creates quantitative, comprehensive, and systemic regional innovation measures which highlight gaps in regional innovation assets, resource endowments and commitments.

Future Work

I intend to follow the current trajectory of my research and focus on small business driven and entrepreneurship-led economic development. In particular, I am interested in working on local governments’ budget balancing strategies in response to massive budget shortfall and reduction and these strategies’ impacts on small businesses.

Shaoming Cheng earned his PhD in Public Policy from George Mason University with his dissertation entitled “Heterogeneous Preferences in the Location Choices of Japanese Investors in China: A Mixed Logit Approach”.



Member Profile: **Christa D. Court** **Staff Scientist with MRIGlobal**

Christa D. Court received a B.S. in Economics and a B.A. in Spanish in 2006 from the Honors College at Middle Tennessee State University. Her honors thesis, titled “Migration of Mayan Market Vendors in Guatemala: A Gravity Model” was supervised by Dr. E. Anthon Eff and sparked her interest in spatial interaction modeling and regional economics. She spent two summers in 2006 and 2007 as a Student Fellow at the American Institute for Economic Research in Great Barrington, MA. In 2008 she received an M.A. in Economics and in 2012 she received a Ph.D. in Economics, both from West Virginia University (WVU).

During her time at WVU, she held the position of Graduate Research Fellow at the Regional Research Institute (RRI) where she participated in multiple research projects funded by the National Science Foundation and the U.S. Department of Energy’s National Energy Technology Laboratory. She also spent two summers at the University of Strathclyde and Cardiff University in the United Kingdom (U.K.) working with Drs. Karen Turner and Max Munday on issues related to hazardous waste accounting in the U.K. Christa’s dissertation, titled “The Three Ws of Hazardous Waste: Who, Why, and Where”, was supervised by Dr. Randall W. Jackson and explored the interconnections between economic structure and hazardous waste generation, transport, and disposal. As a Ph.D. student, Christa received the Jon Vilasuso Advanced Student Award from the Department of Economics at WVU and her work was recognized through two regional science awards: the Early Career/Doctoral Student Award for Best Paper presented at the 39th Annual Meetings of the British and Irish Section of the Regional Science Association International (paper co-authored with Stuart G. McIntyre), and the Barry M. Moriarty Student Paper Award at the 51st Meetings of the Southern Regional Science Association.

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Currently, Christa is a Staff Scientist with [MRIGlobal](#), a not-for-profit research and development organization based in Kansas City, MO. She works for MRIGlobal's Energy Division on 10-15 projects associated with contracts supported by the National Energy Technology Laboratory, the U.S. Environmental Protection Agency, and the Missouri Energy Initiative. She also holds the position of Industry Liaison with the Regional Research Institute at WVU. Much of her current work focuses on the economic impacts of changes taking place in the U.S. energy sector driven by new energy-related technologies, shifts in fuel mix, and environmental regulations.

Christa's other research interests include spatial interaction and spatial econometric modeling, environmental accounting, connections in human and natural systems, and integrating models of the economy and the environment. She remains active in collaborative academic research with colleagues at WVU and around the world on topics such as hazardous waste accounting, applied spatial econometrics, and techniques for implementing new technologies within economic models. She has authored or co-authored pieces in *Ecological Economics*, *Environment and Planning A*, *Papers in Regional Science*, *Letters in Spatial and Resource Sciences*, *Regional Studies*, *International Regional Science Review*, and *Review of Regional Studies*, among others. Christa also regularly serves as an expert witness in mock arbitrations at the WVU College of Law for different exercises in International Environmental Law.

NARSC Members' Recent Grant Awards

Sandy Dall'erba and Jaewon Lim win \$328,652 National Science Foundation Grant

Title: Investing in Science, Research and Technology: Where is the Biggest Bang for the Buck?

PI: Sandy Dall'erba, University of Arizona

Co-PI: Jaewon Lim, University of Nevada at Las Vegas

Summary: Several recent contributions have tried to highlight what factors lead to the production of innovation at the regional level. However, only a handful of them use the appropriate techniques to model and measure spatial externalities; and when they do, they propose global measurements of knowledge spillovers only. As such, this proposal aims at developing previous spatial econometric approaches by accounting for both global and local knowledge spillovers and comparing their measurement with those obtained by interregional input-output analysis. In addition, we use a unique dataset of federally funded R&D investments. The results will show *where* to maximize private and public R&D investments and help regional governments tailor policies to promote knowledge creation.

West Virginia's Regional Research Institute wins \$335,930 National Science Foundation Grant

Title: The Technology, Energy, Economy, and Environment (TEEE) Chain: Integrated Modeling for Technology Transition in Energy Rich Regions

PI: Hodjat Ghadimi, West Virginia University

Co-PI: Randall W. Jackson, Hoda Sabeti, James, Burnett Jerald Fletcher, West Virginia University

Summary: The proposed TEEE framework analyzes technology, energy, environment, and the economy in two important energy rich regions (ERRs) – West Virginia and Shanxi Province, China – and provides a comprehensive set of analytical tools for understanding the national and global consequences of interactions among these complex systems.

Elena Irwin, Allen Klaiber, and Charles Towe win \$800,000 National Science Foundation Grant**Title: Linkages and Feedbacks Between Regional Climate Variability and Patterns of Urban Development – Impacts on the Urban Water Cycle and Nutrient Export**

PIs: Elena Irwin, The Ohio State University

Co-PIs: Allen Klaiber, The Ohio State University, and Charles Towe, University of Maryland

Summary: The goal of the research is to evaluate the interactions between urban development patterns and the hydrologic cycle and its associated nutrient cycles, within the context of regional and local climate variability by creating a modeling system capable of simulating the feedback relationships that control urban water sustainability. This research is part of a larger \$5.0 million collaborative research grant and is contributing to the development of integrated spatial models of land development, hydrological and nutrient flows and regional climate variability to address the following research questions: (1) How do human locational choices, water-based ecosystem services, and regulatory policies affect the supply of land and pattern of development over time? (2) How do the changing composition and variability of urbanizing surfaces affect local and regional climate? (3) How do patterns of development (including the engineered water system) and climate variability affect fluxes, flow paths and storage of water and nitrogen in urban areas?

Marlon Boarnet and Doug Houston win over \$500,000 in grants to support research on light rail in LA**Title: Sustainable Transportation: A Quasi-Experimental Evaluation of Light Rail Transit in Los Angeles**

PI: Marlon G. Boarnet, University of Southern California

Co-PI: Doug Houston, University of California, Irvine

Summary: Los Angeles plans to open six new rail transit lines between 2012 and 2020. Once completed, the world's first "automobile city" will be home to a rail transit network with more service miles than the Washington Metro has today. Using the recently opened Exposition (Expo) light rail line as a case study, Marlon Boarnet (USC) and Doug Houston (UC Irvine) are leading a multi-year, longitudinal evaluation of the travel and transportation impacts of new light rail. Funding support has come from the Haynes Foundation, the Southern California Association of Governments, the Lincoln Institute of Land Policy, the University of California Transportation Center, the University of California Multi-Campus Research Program on Sustainable Transportation, the USC Lusk Center for Real Estate, the Mineta Transportation Institute of San Jose State University, and (pending) the California Air Resources Board. The results will yield one of the first controlled, before-after studies of the impact of new rail transit on travel and physical activity, allowing an evaluation of the role that rail transit can play in meeting California's greenhouse gas emission reduction goals and, in later possible extensions of the research, the impacts of rail transit on land values and neighborhood development.

Randall Wiggle and Nicholas Rivers win \$C400,000 Carbon Management Canada Grant**Title: Designing Carbon Pricing Policy to Drive Innovation in Low Carbon Technologies and Practices**

PI: Randall Wiggle, Balsille School of International Affairs, Wilfrid Laurier University

Co-PI: Nicholas Rivers, University of Ottawa

Summary: First, we will develop a sophisticated computable general equilibrium model, which will significantly advance our capacity to develop carbon pricing policy options for Canada that maximize innovation incentives while minimizing economic and social costs. Second, the research will inform the work of a Canadian Green Fiscal Commission, made up of leading Canadian economic experts (forthcoming, and separately funded). It will research and report on approaches for using market-based reforms, particularly carbon pricing, to build a more sustainable, competitive Canadian economy. Similar commissions in many other countries have had success in laying the foundation for such reforms.

Announcement: Zhenhua Chen Receives the Fourteenth Annual Benjamin H. Stevens Graduate Fellowship in Regional Science

Zhenhua Chen, a Ph.D. candidate in the School of Public Policy at George Mason University, was selected as the winner of the Fourteenth Annual Benjamin H. Stevens Graduate Fellowship in Regional Science. The Fellowship will provide one-year stipend of \$30,000 to support Chen in his research entitled, "Transportation and Regional Output in the Northeast Megaregion: A Spatial Econometric Computable General Equilibrium Assessment." Chen's research seeks to contribute new ideas for infrastructure impact analysis by developing a CGE model with an integration of spatial econometric techniques to solve for spatial dependence. Chen's approach is expected to be very robust since the parameters of factor substitution elasticity are exogenously estimated and the issue of spatial dependence is adequately controlled. The results of the CGE simulation are expected to be much closer to reality than those produced by traditional estimation methods. His research is supervised by Professor Kingsley Haynes of the School of Public Policy at George Mason University.

The Fellowship is awarded in memory of Dr. Benjamin H. Stevens, an intellectual leader whose selfless devotion to graduate students as teacher, advisor, mentor, and friend continues to have a profound impact on the field of regional science. Fundraising efforts to increase the Fellowship's endowment are ongoing. Donations should be sent to: The Stevens Fellowship Fund, First Financial Bank, 1205 S. Neil Street, Champaign, IL 61820 USA. Checks should be made out to The Stevens Fellowship Fund. Donations may also be made by credit card through the NARSC website at <http://www.narsc.org/newsite/donations2.php>.

The 2013-14 Stevens Fellowship competition was judged by a Selection Committee composed of: Antonio Páez, Geography and Earth Sciences, McMaster University, chair; Lawrence Brown, Geography, Ohio State University; Tony Grubestic, Information Science and Technology, Drexel University; Nathaniel Baum-Snow, Economics, Brown University; and Laurie Schintler, Public Policy, George Mason University. The Stevens Fellowship Committee administers the Stevens Fellowship Fund on behalf of the North American Regional Science Council; its members are: Ronald Miller, Chair; David Boyce, Secretary; Michael Lahr, Treasurer; Janet Kohlhase; and Neil Reid, Executive Director of NARSC.