

The Future of Regional Science

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1. Introduction to the Special Issue: the future of Regional Science

1.1. Welcome from the President

by **Andrés Rodríguez-Pose**



Dear friends and colleagues, readers of the RSAI newsletter,

Welcome to the latest edition of the official RSAI newsletter, edited by Andrea Caragliu and Graham Clarke.

This newsletter will probably reach the majority of you at one of the two

forthcoming large Regional Science congresses. Early in November NARSC will hold its very successful annual Congress in Portland, USA, while in April 2016 the 11th RSAI World Congress will take place in the beautiful city of Istanbul, Turkey. These two events will bring together the whole world of regional science and will provide vibrant platforms for the development, diffusion, and exchange of new ideas. I wish all congress participants excellent stays in Portland and Istanbul and would encourage you to use both conferences not only to take advantage of the scientific highlights and exchanges, but also to build on your social networking and to benefit from the excellent opportunities both cities have to offer. For those of you reading this newsletter online, please check out our future conferences. The regional science community is poorer without you and we will all welcome your participation in the future!

There are some stimulating developments within the RSAI to report. First, given their success during 2015, the RSAI Council has recently renewed the two programmes that were launched at the beginning of this year: 'building bridges' and 'nurturing new talent'. 'Building bridges' aims at encouraging the presence of researchers from those areas of the world where Regional Science lacks strong organisational structures at established Regional Science congresses. 'Nurturing new talent' grants support for the promotion of institutes and workshops aimed at bringing

together and training young researchers. These two initiatives are already advertised on the RSAI's website. Please take a look at them, paying special attention to the deadlines. Second, from next year the RSAI will make seed funds available for the preparation of high-risk research projects by young researchers. The call will be advertised at the beginning of 2016. Please continue to make these initiatives a success.

The RSAI will go on building bridges in order to promote and sponsor regional science. It is therefore fitting that the next World Congress will take place in Istanbul, a city at the crossroads of history, bridging not just Europe and Asia, but also cultures and religions. This will be a unique experience and I very much look forward to seeing and reaching as many of you as possible in such an amazing city. Your presence in Istanbul will help increase the visibility of Regional Science across the world.

With best wishes,

Andrés Rodríguez-Pose, London School of Economics
(A.Rodriguez-Pose@lse.ac.uk)

1.2. Welcome to the 2015 NARSC Congress

by **Neil Reid**, *University of Toledo* and **Rachel Franklin**, *Brown University*



Neil Reid
University of Toledo
Executive Director
North American Regional
Science Council
(neil.reid@utoledo.edu)



Rachel Franklin
Brown University
NARSC 2015 Program Chair
Executive Director Western
Regional Science Association
(Rachel_Franklin@brown.edu)

On behalf of the North American Regional Science Council and the Western Regional Science Association it gives us great pleasure to welcome you to Portland, Oregon for the 62nd Annual North American Meetings of the Regional Science Association International. With more than 650 regional scientists from across the world in attendance

these meetings provide an excellent opportunity to learn about cutting edge research being undertaken by your colleagues. The meetings are also about networking and so we hope that you enjoy not only catching up with old friends but also making new professional acquaintances. Hopefully, these conversations during a coffee break, over a drink at the bar, or over dinner will stimulate new ideas for professional collaborations.

While here please take the opportunity to explore the city of Portland. Portland is known as the "City of Roses" as its climate is ideal for growing this particular flower. The city is also noted for its progressive land use planning and investment in a user-friendly public transportation system. If you happen to be a beer drinker you should also enjoy the city. Portland has been at the epi-center of America's craft beer revolution and is home to over one hundred craft breweries. So please enjoy the conference and your visit to Portland.

1.3. Welcome to the 2016 World RSAI Congress

by **Tüzin Baycan**, *Istanbul Technical University* - Chair of the LOC (tbaycan@itu.edu.tr)

Dear Colleagues and Friends,

The 11th World Congress of the Regional Science Association International (RSAI) will be held from April 25-28, 2016 in Istanbul, Turkey. The Turkish Regional Science Association will host the congress,

and we expect the congress to attract hundreds of participants from the fields of economics, geography, planning and public policy, from different parts of the world.

On behalf of the Organizing Committee of the 11th World Congress of the RSAI, I have the honour and pleasure to invite you to Istanbul where the two continents of Europe and Asia meet.

Istanbul is one of the most magical and enchanting cities and is a UNESCO World heritage site. It is endowed with



unrivalled beauty complimented by unique harmony of ancient and contemporary, oriental and occidental. The city is located at the crossroads of civilizations and is the only major city in the world built across two continents. It bridges Europe and Asia geographically and culturally. The history of the city dates back 8,000 years, and having been the capital for three successive great empires, Eastern Roman, Byzantine, and Ottoman, it has been a melting point for various cultures and religions.

The conference promises an impressive venue in the heart of Istanbul, a broad range of topics pertaining to regional science and regional policy issues and a diverse audience comprising academics, policy makers and practitioners from around the world. We aim to organize a high quality conference that is academically rigorous, professionally relevant and socially entertaining. We thus aim to make this congress a memorable and rewarding experience for all participants.

The participants will have the opportunity of taking pre- and post-congress tours to Aegean and Central Anatolian Regions of Turkey. On the web page www.2016worldcongress.regionalscience.org, we provide lots of information about the venue, means of transportation and the city itself. We are looking forward to seeing you in Istanbul to enjoy the famous Turkish hospitality.

With warmest regards,
Tüzin Baycan



1.4. Welcome from the Editors

by **Andrea Caragliu** (andrea.caragliu@polimi.it) and
Graham Clarke (G.P.Clarke@leeds.ac.uk)



Andrea Caragliu



Graham Clarke

We are pleased to welcome you to the Autumn 2015 issue of the RSAI Newsletter. The first Congress of our Association was held in 1954. It is safe to say that, since the discipline has turned 60, it is an appropriate time to revisit where we are, and where we are heading. Major policy and academic challenges lie ahead as are discussed by many colleagues below. We begin with Peter Nijkamp, who challenges our vision of Regional Science as a coherent and independent discipline; his article suggests that course curricula need to be updated with the latest advancements in Regional Science, which, as also witnessed by previous Newsletter issues, develops at a very fast rate.

Institutional perspectives on the future of our discipline are presented by Antoine Bailly and Lay James Gibson; in their article they provide a wealth of suggestions for further developing our discipline both in the academic world as well as in the policymaking arena; Roberta Capello then offers her insight into some of the main research issues that need to be tackled by Regional Scientists over the next years.

After a fun and interesting interlude, where Gordon Mulligan describes his career's highlights in the usual "Meet the Fellows" column, we get back to the topic of this Special issue with Ana Maria Bonomi Barufi, Karima Kourtit, Elizabeth Mack, and Peter Nijkamp, who talk us through the proposal for a Regional Science Academy to tackle the challenges lying ahead of our discipline.

Finally, for the usual "Centres of Regional Science" column, we travel to Bucharest, where our host, Daniela

Constantin, describes the PROMAR research unit at Bucharest University of Economic Studies.

We believe the challenges that lie ahead of Regional Science should be addressed, with the aim to provide new insights into how space influences our everyday activities. We also do hope this Special Issue will offer a useful perspective on how to deal more effectively with them.

We wish you a pleasant and entertaining read, and if you have any comments or suggestions do let us know by e-mail to andrea.caragliu@polimi.it and/or G.P.Clarke@leeds.ac.uk

2. In search of a discipline: envisioning and framing a regional science roadmap

by **Peter Nijkamp**, *Free University Amsterdam*
(p.nijkamp@vu.nl)



More than 50 years ago, the founding father of Ekistics, Doxiadis, wrote the following historical words which have not yet lost a single piece of actuality: *"We come from different nations, from different cultural backgrounds. Our politics differ, our professions are various. But we believe that the problem of human settlements is a general and fundamental problem in our new dynamic world and that it must be viewed and studied in such a way that it will, in common with all great scientific disciplines, transcend our local differences"* (Newsletter Ekistics Association, Delos Symposium Declaration, 1963, p. 22). This statement saw its light in the early days of regional science, but shows a missionary drive that is comparable to the first publications of the late Walter Isard in the 1950s, which heralded the birth of regional science.

Regional science is usually conceived of as an organized multidisciplinary endeavour to study and understand the regional (including urban, rural and transportation) dimensions of the space economy and to shape a rational scientific foundation for regional policy. Right from the outset in the 1950s, the question was raised as to whether

regional science would have to be regarded as a distinct scientific discipline – with its own distinct subject matter including an appropriate theoretical and methodological framework - , or as an amalgam bringing together ideas, concepts, theoretical frameworks, methodologies and application domains from a variety of existing disciplines that are addressing the spatial or geographical aspects of our earth, such as economic and social geography, demography, regional and urban economics, transportation economics, political science, land-use planning, urban architecture, rural sociology, environmental science etc. Even the appropriateness and validity of the name 'regional science' has sometimes been questioned. Also until today, the name 'spatial science(s)' has also been used as a label.

Clearly, despite many efforts and heated debates, the cherished ideal of many colleagues for regional science to be a recognized discipline adopted by major universities in the world has never materialized. For some of us, this observation may sound disappointing. But at the same time the good news is that world-wide we can observe many curricula in regional science, sometimes accompanied and supported by centres, institutes or departments of regional science. Furthermore, we witness the existence and emergence of many complementary educational and institutional initiatives, such as in urban and regional planning, urban and regional economics, land-use policy, and so forth. As long as such initiatives are intellectually powerful enough and driven by an open mind to get to grips with the complexity of the modern space economy, one may expect that through 'bonding and bridging' of various disciplinary approaches a regional science family will (continue to) exist that acts as a support mechanism and an intellectual umbrella for the spatial sciences in a broad sense.

A broad analysis framework for regional science is indeed pertinent, as it does not only incorporate many disciplinary approaches, but also has seen an extension of its scope and coverage. I offer here a few examples:

- A shift from tangible spatial interactions (e.g., people, goods) to intangible and cognitive interwovenness (e.g.,

ideas, information, big data), which has prompted the emergence of new types of proximity analysis (witness the path-breaking research of Andre Torre).

- The re-interpretation of the scientific and mental map of the space-economy, through the awareness of fast and slow spatial dynamic processes, including the emergence of catastrophe, chaos and resilience theory (witness the fundamental works of Aura Reggiani) or the rising popularity of evolutionary geography (inspired by the seminal contributions of Ron Boschma).

- The increasing recognition of interdependent micro-meso-macro processes in complex spatial systems, which have led to advanced innovative studies on spatial statistics and econometrics (as witnessed in the fundamental research by Manfred Fischer, Arthur Getis and others), a development which forces regional science to be even more open-minded than it already is.

Meanwhile, regional science educational programmes and curricula are faced with ever increasing demands on the contents and specification of master and Ph.D. courses. Is there a single and unambiguous recipe to give an undisputed and recognized quality to a regional science course? This question becomes even more relevant, since in the past years – as part of a rational quality control and accreditation process of universities, faculties and departments all over the world - the claims on scientific curricula have significantly risen, to the extent that in various universities there is no place anymore for a non-officially accredited and tested curriculum. It is therefore, pertinent that regional scientists – and in a broader context spatial scientists - join hands in formulating testable criteria for assessing courses and curricula in the domain of regional science. Whether such a course is coined regional science, urban or regional planning, or spatial economics seems to me less relevant at this moment. It is a matter of survival for regional scientists to roll up their sleeves and share responsibility in formulating what is to be expected by clients from the intellectual baggage of the next generation of regional scientists. This missionary task does not only apply to the 'old' heartlands of regional science, but also to emerging and developing economics.

I wish to add that the above mentioned strategic tasks deserve full-scale attention by the worldwide regional science community. It is also noteworthy that such ideas are explicitly recognized as belonging to the remit of the Regional Science Academy, a novel initiative that aims to serve as a wake-up call for spatial scientists in order to develop forward-looking ideas on theory, methodology, education, smart cooperation and science-policy interactions in regional science.

3. Challenges for Regional Science: institutional prospects

by **Antoine Bailly**, *University of Geneva* (antoine.bailly@unige.ch) and **Lay James Gibson**, *University of Arizona, Tucson, USA* (ljgibson@comcast.net)

We are cautiously optimistic that regional scientists will focus on appropriate topics including cutting edge ones but other changes such as those proposed here will probably be painfully slow in coming. Our concerns are with the institutional frameworks that support regional science.

When regional science is found in universities it is likely to be a program within a formal department but not an entity with its own budget or with a dedicated faculty. The same is true of regional science in industry or government. Very competent regional scientists may be found in these settings but their titles rarely if ever contain the words "regional science." Nor do the units to which they are assigned.

This is not to suggest that regional science performs poorly but it does suggest that regional science might be a fragile enterprise and one with limited prospects. What a pity!!

We have been concerned with the prospects of regional science as a generally recognized "brand" since at least the mid-1990s. Others have shared our concern. The founder of regional science, Walter Isard was tireless

when it came to spreading the gospel of regional science. Progress in making regional science a fixture on academic, civic, and corporate landscapes has been mixed. On the bright side we have seen growth in the number and quality of regional science associations and growth in their membership. We have also seen growth in the number of regional science scientific journals, in the number of pages that they publish and in the number and diversity of citations that they generate. On the downside we have already noted the scarcity of academic departments and the paucity of academic, corporate, or governmental job titles that carry the words "regional scientist" or something of the sort.

We do not think that all is lost but we do think that we need to renew the conversation on how we should move forward to secure regional science's place as a scientific field or, even, as a core discipline.

To revive this discussion we published a paper titled "Securing the Future of Regional Science; Conditions for a Core Discipline." (*Studies in Regional Science*, 2015, forthcoming). In this paper we present 14 items that we think will help secure the future of regional science and we offer five recommendations that might serve as a framework for future initiatives.

Specifically we would like to see workshop-type sessions organized at future conferences to consider these general recommendations and to develop appropriate action plans. The first of our recommendations could benefit from the formation of a new RSAI Education Committee. Recommendations 2-5 could be the focus of an RSAI Marketing Committee.

Each committee might have 2-3 senior scholars, perhaps from the Long Range Planning Committee, and 2-3 mid-career scholars who show promise for joining RSAI's leadership ranks.

1.) Design Instructional Courses

The proliferation of courses at the undergraduate and graduate levels will broaden awareness of the regional science "brand" and will build appreciation for regional science as a useful applied field.

Ideally, perhaps, the introductory course would be aimed



at first-year students but the lack of regional science departments makes it more likely that the introductory course will be offered as an elective by departments of economics, planning, or geography and that it will be aimed at more advanced undergraduates. In a perfect world there would be a second, more advanced course, to better prepare students for graduate study in regional science.

2.) Make Recognition of Regional Science Explicit

It is essential to make recognition of regional science and the work of regional scientists explicit, not just implicit, part of the instructional package. Regional science per se needs to be recognized for its leadership in the search for solutions to significant research problems.

3.) Develop Networks

By strengthening existing networks and building new ones regional scientists will have expanded access to, and more regular contact with, professional planners, consultancies, government agencies, and the private research sector. Improved access to the research staff and management and administration of such organizations and agencies should result in expanded opportunities for regional scientists.

4.) Create an Academic Culture that Values Extramural Funding

Curiosity driven research will always be valued but client driven research carries with it the fact that its value is more explicitly recognized. And it provides expanded opportunities for research scientists. The most sustainable academic enterprises are those which forge appropriate partnerships with government agencies, private firms, GSEs, and NGOs.

5.) Be Aggressive in Cultivating the Media

The media can encourage public awareness and recognition of the contributions of regional scientists to solving problems facing government, private firms, GSEs, and NGOs. And we must also be aware that media pressure can be helpful when it comes to building new departments and to attracting students and research funding. The media can help build the image of regional science and build the regional science brand.

4. News from the RSAI

4.1. Book series *Advances in Spatial Science*: Call for book proposals

On the occasion of the 20th anniversary of the book series *Advances in Spatial Science*, we would like to invite scholars in the fields of regional and spatial science to submit book proposals for consideration in the series.



This series contains scientific studies focusing on spatial phenomena, utilising theoretical frameworks, analytical methods, and empirical procedures specifically designed for spatial analysis. *Advances in Spatial Science* brings together innovative spatial research utilising concepts, perspectives, and methods relevant to both basic science and policy making. The aim is to present advances in spatial science to an informed readership in universities, research organisations, and policy-making institutions throughout the world.

Over the last two decades, the series has published a steady flow of four books per year contributed by some of the best known and most influential regional scientists from around the world. In 2015 alone, the books in this series have had more than 70.000 digital downloads on Springerlink.com. It has become a lighthouse of thought and the most comprehensive collection of published books in the field.

The book series publishes monographs and contributed volumes of theoretical and applied research in Regional and Spatial Science, as well as edited handbooks covering fundamental research. The series encourages new volumes on innovative theories and methods in Regional Science, and also edited books from specially organized research seminars and workshops.

For more information on the series please visit:

<http://www.springer.com/series/3302>

If you want to submit a book proposal please contact: Hans Westlund (Hans.Westlund@abe.kth.se) or Jean-Claude Thill (Jean-Claude.Thill@uncc.edu).

Sincerely,
 Manfred M. Fischer, Jean-Claude Thill, Jouke van Dijk,
 and Hans Westlund
 Series Editors *Advances in Spatial Science*

4.2. 2016 ERSA Summer School

The European Regional Science Association is pleased to announce, in collaboration with RSAI, AISRe and the Politecnico di Milano, the opportunity for Ph.D. students to participate in the 29th ERSA Summer School which will be held from the 3rd July to 10th July, 2016 in Milan, Italy, at the Politecnico di Milano.

The theme is "*Space, Territory and Growth. Advances in Regional Science*".



The aim of the Summer School is to provide Ph.D. students with the most updated advances in Regional Science from both theoretical and

methodological points of view.

Lectures will be given by internationally recognized scientists in the field. Participants will also be given the possibility to present their own Ph.D. work, provided that this is sufficiently advanced to be presented and to get useful feedback.

More information can be found on the ERSA web site: <http://www.ersa.org/events/summer-schools/2016-summer-school/>

4.3. 2015 ERSA Summer School

The 28th ERSA summer school held in 2015 was organized jointly with the European Real Estate Society (ERES) between July 5th and July 14th at WU in Vienna, Austria. Fifteen students from all over the world attended the program entitled "*Developers, Planners, and the City*". In a series of lectures, site visits, and student presentations the relationship between profit-oriented real estate developers on the one hand, and public sector

based urban planners on the other hand was explored.

Lecturers came from Austria (Christoph Schremmer, Verena Madner, Philipp



Kaufmann, Gunther Maier) and from abroad (Paul Cheshire, Daniel Czamanski) and they covered various aspects of the summer school program. Theoretical presentations and discussions were complemented by a series of visits to development sites in Vienna with presentations by, and discussions with, representatives of developers, investors, and planning authorities. The sites visited covered a range of characteristics from established to very new, private or public initiatives, central or peripheral in the city, moderately sized to large.

The highlight of the social program was a trip to the Wachau. There, participants also visited the monastery of Melk, the picturesque village of Dürnstein, and ended the day at a traditional wine tavern.



4.4. 2015 ERSA Congress – Lisbon

The European Regional Science Association Congress that took place in Lisbon in August 2015 registered a great attendance with 852 participants from 46 countries around the world. According to the survey filled in by 40% of the participants the quality of the logistics and the content of the plenary and parallel sessions were very good and the participation in the plenary sessions, although with less participation, filled the main rooms available.

4.5. Invited plenary address by Bob Stimson at the annual ANZRSAI congress

The Australia and New Zealand Regional Science Association International (ANZRSAI) annual conference will be held in Sydney in December 2015. A highlight of the conference will be an invited plenary address by Professor Bob Stimson following his retirement in July after 50 years of distinguished research. His topic will be "Challenges and Opportunities for Regional Science Research to be More Policy Relevant".

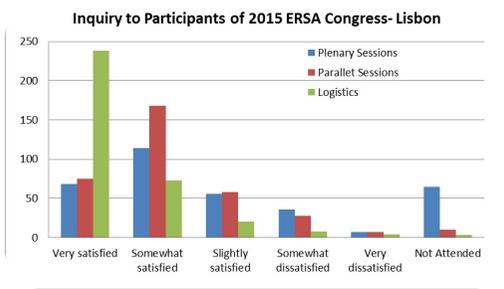


Bob Stimson continues to be an Honorary Professor of Geography at the University of Melbourne and an Emeritus Professor in Geography at the University of Queensland. He is a past President of the Regional Science Association International, an elected Fellow of RSAI and the sixth recipient of the prestigious Hirotao Kohno Award presented by RSAI for outstanding service to the regional science community.

4.6. RSAI/ERSA 2015 Barcelona Workshop on Regional and Urban Economics: Spatial Perspectives of Human Capital

The "RSAI/ERSA 2015 Barcelona Workshop on Regional and Urban Economics: Spatial Perspectives of Human Capital" will be held in Barcelona on November 26th-27th 2015 (http://www.ub.edu/aqr/anterior/workshop2015/?RSAI%2FERSA_2015_BARCELONA_WORKSHOP_ON_REGIONAL_AND%0AURBAN_ECONOMICS). The AQR-IREA Research Group of the University of Barcelona is in charge of the workshop's organization, with the support of the Regional Science Association International (RSAI) and the European Regional Science Association (ERSA).

The workshop will be focused on Spatial Perspectives on Human Capital. Its aim is to bring together researchers in urban and regional economics, as well as in other



Key Facts

828 Presentations; 177 Parallel sessions; 65 Topics; 3 Plenary sessions (including Parliament session (Science vs Policy)); 3 Semi-Plenary Sessions (OECD Session and 2 round tables: EIB and Espon/ERC/ Bank of Portugal); 2 Technical Visits; 4 Publishers and 5 Prizes.



Parliament Session

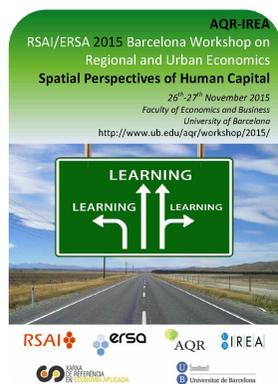
With Corina Cretu, European Commissioner for Regional Policy



Martin Beckmann RSAI Award 2015

Johan Klaesson, Martin Andersson and Johan P Larsson awarded for the best paper published in Papers in Regional Science in 2014, Volume 94, Issue 4

interrelated disciplines such as labour and education economics, who are working in topics where the broad concept of human capital and its interrelations with space play a fundamental role.



The schedule is quite exciting: twelve papers by researchers from several countries will be presented over two days, which will be complemented by a keynote lecture by Stephen Gibbons (Department of Geography and Environment, SERC and CEP, LSE), who will contribute to the workshop

with his worldwide recognized expertise on the topic. AQR-IREA charges no fees for attending the workshop and covers accommodation and travel costs for all the presenters of accepted papers. This year, among the presenters, we have the pleasure to host up to six PhD students from different European Institutions, who will be able to present and discuss their works with senior researchers in the field. This has been possible thanks to the financial support of the RSAI's "Nurturing New Talent" initiative, which is specifically aimed at fostering participation of talented young researchers in international scientific meetings.

You are all invited to attend the "RSAI/ERSA 2015 Barcelona Workshop on Regional and Urban Economics: Spatial Perspectives of Human Capital"!

5. Future challenges for Regional Science: scientific prospectse

by **Roberta Capello**, ABC Department, Politecnico di Milano (roberta.capello@polimi.it)

More than sixty years have passed since the publication of the volume "Location and Space", by Walter Isard. This book marked the beginning of Regional Science. Since



then, we have all contributed a great deal to the development of our scientific field. We have worked in different directions, but the most fascinating one is in my opinion the increasingly complex and intriguing ways in which economic growth models treat space. The simple (and in certain respects trivial) interpretation of space as uniform-abstract and straightforwardly relatable to administrative units – a space conceived as internally homogeneous and uniform, and which can therefore be synthesised into a vector of aggregate socio-economic-demographic features – has in recent years been replaced by a notion of diversified-relational space which restores to theories of regional development some of the founding principles of location theory: i.e. agglomeration economies and spatial interaction.

After sixty years, the major mistake we could make is to claim that we have nothing new to work on. Retrospective analyses are satisfactory, but prospective views are even more interesting to be explored. Each of us has for sure his/her research agenda, rich in fertile ideas waiting to be developed, enriched by the recent provocative idea Peter Nijkamp launched to our international scientific community, i.e. that Regional Science requires a new scientific paradigm to avoid entropic death.

I do not know if Peter is right or not, but I feel that we still have much to do. In the new edition of my "Regional Economics" textbook, I envisage important future challenges ahead of us.

The most urgent one, in my opinion, relates to the need to merge macroeconomic elements with local ones in regional growth models. Modern theories of local development have stressed (with evidence) that regional development trajectories today depend on endogenous elements, and it is on these elements that regional competitiveness relies. However, in the period of crisis as the one we have just gone through, we have discovered that our theoretical toolbox in regional growth modelling has not been able to interpret the spatial effects of the crisis. In a period of economic downturn, we all became aware that one cannot ignore macroeconomic, aggregate demand elements, since these decisively influence the

destinies of the single national economies and their regions. Conditions of public debt and deficit, deflation, country reliability, trends in public and private consumption and investment determine a country's growth trajectories, and of all regions belonging to that country.

New growth theories have made commendable efforts to include space in strictly economic models. Also to be commended is the implicit merging in its theoretical structure of the various conceptions of space put forward over the years: the merging, that is, of the physical-metric space represented by transport costs with the diversified space which assumes the hypothesis of the existence of certain territorial polarities where growth cumulates. However, this approach is still unable to combine the macro-economic laws and mechanisms that explain growth with territorial factors springing from the intrinsic relationality present at the local level. An approach that did so would represent the maximum cross-fertilization among location theory, development theory and macroeconomic growth theory; a synthesis which would bring out the territorial micro-foundations of macroeconomic growth models.

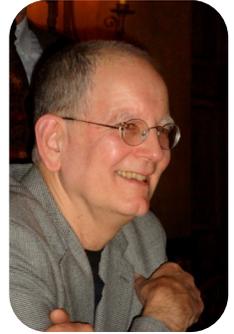
What is still needed, therefore, is a convincing macro-economic model which comprises the micro-territorial, micro-behavioural and intangible elements of the development process. This is not a simple step forward. Required for this purpose is the definition of patterns, indicators, and analytical solutions to be incorporated into formalized models necessarily more abstract and synthetic in terms of their explanatory variables. A step in this direction can start from quantitative sociology that embraces the paradigm of methodological individualism and seeks to 'measure' the social capital of local communities. All this calls for the identification of territorial specificities within a macroeconomic model. Or, in other words, it calls for the identification of the territorial micro-foundations of macroeconomic growth models. This is the challenge facing regional economists in the years to come.

6. Meet the Fellows: Gordon Mulligan

by Gordon Mulligan

Imagine if you can an Allan Sillitoe novel set on a Norwegian fjord and you might have some idea about my childhood years. I was raised in a company mill town on the west coast of Canada where, until the late 1950s, marine transportation was the sole means of reaching the outside world. In many ways, though, this isolated community was a socialist utopia—workers earned the same wages, families paid the same rents, crime did not exist, and social capital was very high. All this radically changed when both a railway and a highway were completed to Vancouver. Soon thereafter the community experienced a lot of turnover and the town site was eventually closed down—then all families moved elsewhere and workers had to commute. This disruption was much more drastic than what William Garrison and Brian Berry had recently chronicled in nearby Marysville, Washington, where that community's social and business fabric was severely strained by the new Interstate highway system.

I started classes at the University of British Columbia in the mid-1960s and I enjoyed the student lifestyle so much that I remained at UBC for a decade. This was the most carefree period of my life—my studies were well supported by the government, I lived in vibrant neighborhoods like bohemian Kitsilano Beach, I often cycled to school, I read a lot of Dostoevsky and Pynchon, I became very interested in film noir, and I made numerous friendships that have lasted a lifetime. My undergraduate studies were mostly devoted to mathematics where I was exposed to most aspects of the discipline. Later, in graduate school, I specialized in human geography and economics but dabbled in several other disciplines. During graduate



Enjoying his retirement party in Sedona at the WRSA (2010)

school I also spent many evenings imbibing at the Cecil hotel, a pub whose regulars included left-leaning university faculty, union leaders, and the founders of Greenpeace. My first university course in geography focused on Europe's regions and I can recall writing a historical account of the continent's shifting iron and steel industry. While researching for this paper I encountered Weber's least-cost analysis and also came to appreciate how transportation improvements can significantly change land uses and entire patterns of industry. The following year, my first in graduate school, I took a series of informative courses on regional analysis, urban geography, and economic development. It was all very exciting and, for the first time, I was carefully reading journals instead of getting original ideas filtered through textbooks. My MA thesis, which combined some analysis with a lengthy literature review, addressed city-size distributions—separate chapters were devoted to central place theory, stochastic processes, historical studies, and issues related to primacy. I find it interesting that this has become such a hot topic in regional science during the past fifteen years or so.

While studying for my PhD I was given a lot of freedom and, as a consequence, I made a number of false starts on a dissertation. In fact, I still have notes from this experimental period and have revisited some of the half-baked ideas I formulated about location theory at that time. Eventually, though, I focused again on central place theory and wrote a somewhat unremarkable treatise on structure and process in Christaller's system. Martin Beckmann was my external examiner and he was very generous in his evaluation.

Throughout this period Ken Denike served as my advisor and much of my thinking was influenced by what Ken had already learned from people like Walter Isard and William Alonso at the University of Pennsylvania. Curt Eaton also served on my committee and his perspectives on agent behavior continue to influence how I view decision-making problems that involve space or location. Clearly one of the highlights of this period was meeting John Parr and he, Ken, and I wrote a paper that was published in the mid-

1970s addressing the relationship between a city's population size and the formation of its economic base.

After leaving UBC, where I had been far too long, I was



Having lunch in Squamish with past WRSA president Warren Gill (2010)

very fortunate to get visiting positions, first at the University of Washington and then at Queen's University. I had many lunches with Dick Morrill in Seattle and he managed to dispel much of my skepticism about the value of government policy, at least with regard to locating public facilities. Maurice Yeates in Kingston made me think a lot more about rent theory, and perhaps I should have accepted his advice (and data) to study how new transportation investments were reshaping the land value surface of Toronto. Later in my career I accepted other visiting positions, in North America and Australia, and always found these very productive times given the reduction in paperwork and committee assignments.

By the late-1970s I was looking for a more permanent residence. I had been talking a lot with Michael Dacey in Geography at Northwestern University and was very fortunate to avoid the personnel fiasco that was just brewing there. Instead I moved to the University of Arizona in Tucson, which in many ways turned out to be a very good choice. At that time both Geography and Economics were located in the Business College so the Geography faculty received a lot of exposure to undergraduates who were interested in either real estate or local development.

We also encountered students who were keen on entering the university's graduate Planning program, where they would be greeted by Penn graduate Art Silvers. Even though the department was eventually moved to another college, we slowly put together a very solid program in Regional Development that attracted up to 300 majors per year and produced some of most distinguished undergraduates across the entire university. Unfortunately, though, departmental politics trumped this success story

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and several of my colleagues eventually left in frustration over the department's new direction.

While I was finishing up a number of papers on multipurpose shopping and central place populations I became intrigued by the work being done on small towns by several of my colleagues, including Lay Gibson. Much of this was applied research, funded by the Arizona government, and involved the collection of employment data in the field. Here the economic bases of many towns in the US Southwest were summarized in a series of monographs that were published over a twenty-year period. I thought the results could be usefully generalized by collapsing the results into one data set and this led to my work on estimating small-area economic base multipliers. Once micropolitan places were recognized by the U.S. Census Bureau in the 1990s I was able to use this earlier work to establish another shortcut method for estimating multipliers in towns and less populous counties. One of the most important contributions here was showing how non-earnings income and other factors, including the incidence of natural amenities, can affect both the size and job composition of those multipliers.

While at Arizona, which I eventually left in 2006, I was fortunate to supervise some very good graduate students, but had special relationships with Timothy Fik and Alexander Vias. Tim's enthusiasm for all problems involving geographic clustering and spatial contiguity was infectious and he was largely responsible for my rethinking of various analytical matters, including how conjectural variations might affect both price and location in spatial competition models. We enjoyed a good division of labor where one of us would design the mathematical models while the other would write programs for the numerical solutions. Alternatively, Alex's interests were along the lines of rural economic development and we became very interested in unpacking "chicken or egg" issues, especially trying to detect whether population growth was leading or lagging employment growth across the American West. This demo-economic work was nicely informed by the insightful ideas on interregional compensating differentials that had been pioneered by other regional scientists.

Productive relationships were also formed with many others, including Meagan Cahill, who worked on urban crime; Sang-Yool Lee, who studied the role of uncertainty in agriculture; and Chris Bitter, whose remains interested in all aspects of housing. I particularly enjoyed working with those graduate students whose interests did not coincide with my own as they challenged me to read new literatures and grasp different methodologies.

Dave Plane joined us at Arizona in the early 1980s and we later co-edited the Journal of Regional Science for



Hiking with Dave Boyce and Curt Eaton in Glacier Park; photo by Jay Allen (2011)

nearly a decade. Even though Dave and I both enjoyed some prior editorial experience, we were a little anxious when we assumed this responsibility because Ron Miller had done such an exceptional job with the journal at Penn. Dave is one of the most organized scholars around and we soon agreed to meet once a week to keep on top of the steady flow of submissions and reviews. I like to think we broadened the audience of the journal although we were never in favor of publishing special issues, a trend that seems so popular today. It is not common knowledge that the JRS was once owned by the Regional Science Research Corporation and that it was during our tenure that all production matters were transferred to Blackwell. Basically Ben Stevens was the RSRC and I can still recall the lengthy (and expensive) telephone discussions between Ben and myself—where he talked and I listened—that addressed the journal's direction, impact, and readership.

Over the years several other well-known people—including Adrian Esparza, Brigitte Waldorf, and John Carruthers—joined our core group at Arizona so that, during the 1990s, we had a very strong regional science program. My exposure to John proved to be especially fruitful as we went on to do a number of projects together after we had both left Arizona for other climes. Our earliest

interactions led me to reconsider the issue of amenity valuation and this topic has remained on my active list ever since. John also persuaded me of the great importance of land-use issues, whose neglect has serious implications for quality of life in both metropolitan and nonmetropolitan settings.

Without doubt the two highlights of my academic career were my regional science retirement party and my Fellows selection. In conjunction with the 2010 meetings of the Western Regional Science Association, John Carruthers arranged a sumptuous dinner in the Sedona hills that brought together a large international crowd of friends and well wishers. The highlights included some dubious stories by Bob Stimson and a clever roasting of my accomplishments by Kingsley Haynes—both close friends and past RSAI presidents. Using some of the diverse papers that were given at that meeting, a special issue of the *Annals of Regional Science* was then dedicated in my honor. I have mixed emotions when I think back on this special occasion because two of the participants, who were especially good friends, passed away soon thereafter. Being notified of my Fellows selection later that year was an equally satisfying event. Now, though, I sought something a bit more intimate so I requested that the award ceremony be delayed until the summer of 2011 when I would be hiking with friends in Glacier Park. This prestigious RSAI award was presented to me by Dave Boyce on a lovely day at a lodge overlooking Swiftcurrent Lake and the event was photographed by Curt Eaton, who had served on my PhD committee so many years earlier.

These days I'm living in Squamish, British Columbia, five miles from where I started, where I stay active hiking in the summer months and curling during the winter. I still remain involved in research and continue to enjoy working with younger regional scientists on a variety of different topics. In fact I believe I have now published with more than 40 co-authors over the years. Many of these people have been students of mine—either undergraduate or graduate—and that has been one of the most satisfying aspects of my career. I try to make it out to one or two regional science conferences each year but generally

restrict myself to those having fewer participants, like the British-Irish meetings. On the other hand it is encouraging to see so many younger people at the larger meetings, including the WRSA where former Arizona student Rachel Franklin has been active in recruitment. So if you happen to spot me at one of those meetings please feel comfortable about coming up and introducing yourself.

7. Regional Science as a radical science innovation



Ana Maria
Bonomi Barufi¹



Karima Kourtiti²



Elizabeth Mack³



Peter Nijkamp⁴

In the past months various discussions among spatial scientists have taken place on the idea to create a Regional Science Academy. The Regional Science Academy is meant to be an independent network of recognized scholars in Regional Science who seek to study and to promote sustainable regional development around the world through innovative and forward-looking initiatives and intellectual contributions to scientific research and higher education in the spatial sciences. Its mission is to enhance awareness and to stimulate multidisciplinary and translational research in Regional Science, addressing both local and global challenges, with the involvement of parties from both the science and policy communities.

The concept of the Regional Science Academy was inspired by various brainstorm meetings with both junior and senior scholars in Regional Science, who felt that time had come for a radical innovation in the field, in terms of

¹ Department of Economics, University of Sao Paulo, Brazil, ana.barufi@gmail.com

² KTH Royal Institute of Technology, Stockholm, Sweden; A. Mickiewicz University, Poznan, Poland, karima.kourtiti@abe.kth.se

³ 4909 W. Joshua Blvd. Unit #119, Chandler, AZ 85226, Arizona State University, USA, eamack1@asu.edu

⁴ VU University Amsterdam, The Netherlands; A. Mickiewicz University, Poznan, Poland, p.nijkamp@vu.nl

both theory/methodology and new mindsets, as well as of a harmonization and certified upgrading of Regional Science curricula worldwide. In other words, a new *modus operandi* of Regional Science would be needed. The Regional Science Academy is a strategic spatial knowledge catalyst: it acts as a global intellectual powerhouse for new knowledge network initiatives and scholarly views on regions and cities as vital centerpieces of interconnected spatial systems all over the world.

The strategic roles of the Regional Science Academy would be as follows:

- Find new (and possibly revolutionary) directions of research, rank research priorities and propose guidelines for novel future research;
- Act as a scholarly and dynamic think-tank for all scholars in the spatial sciences;
- Review critically whether prevailing concepts and methodologies in Regional Science are still valid for understanding current and emerging issues, which often represent new application contexts;
- Become an effective vehicle for the birth of new policy initiatives in Regional Science and to explore new theoretical and practical realities using new analytical frameworks;
- Bring practitioners and researchers closer by leveraging common needs and questions that also result in the development of novel analytical strategies.

The Regional Science Academy should ensure the injection of new blood into Regional Science, by broadening its frontiers and focussing on new horizons (both widening and deepening). It should also be relatively independent of other organizations, such as the RSAI, yet work cooperatively with them at the same time. Clearly, it should avoid repeating pre-existing activities and practices.

In the light of the previous ideas and ambitions, there is a need for appropriate new techniques, methods and theories that can address and better explain the dynamic nature of the real world. The Regional Science Academy would act as a vital vehicle for the birth of new concepts in the spatial sciences, especially if this initiative could also

reach out to 'new' places (e.g. Africa), where new realities will likely result in new scientific challenges. The Regional Science Academy has the mission of translating and sharing regional research in different environments, and of being open to, and fostering openness amongst, all spatial scientists, while reducing its proximity to other disciplines. Moreover, it will also engage practitioners and researchers by focusing on new needs and soliciting urgent questions in need of new analytical support.

The Regional Science Academy would be active on four domains: a think-tank function, curriculum development, information and data warehousing, and general service provision to spatial scientists.

Think-Tank

On the 'think-tank' role of the Regional Science Academy, a series of challenging and intriguing scientific issues ought to be put in perspective, such as:

- What is the relevant concept of space in the context of both global and local human mobility and regional and urban development?
- Why are transformative changes (i.e. population ageing) path dependent instead of an intrinsic function of the regional environment? For example, what are the spatial-economic impacts of the ageing process?
- How does climate change affect the physical environment, economic growth and competitiveness?
- What is the relationship between investment in global financial markets and location decisions in the real economy without migration barriers for business and people?
- What will happen to the distribution of wealth in a globalising economy? How can we describe the process of adjustment of the regional-economic system after exogenous shocks?
- Why does the natural science based gravity formulation fit so well to data related to spatial interaction? Or should there be a general theory of human interaction that goes beyond what we have learned so far?
- How will information and communications technologies (ICTs) like the Internet and other new technologies affect work-life balance and the spatial dynamics of labour

markets?

- How will spatial connectivity structures influence individual/aggregate well-being and related choice models? How will people behave and respond to new spatial connectivity structures (both physical and non-physical)?
- What is the role of science in general - and Regional Science in particular - given emerging and foreseeable drastic economic-political changes? Can an interdisciplinary approach help to discuss the role of formally bounded regions, space, and place under the conditions of this new world?
- How do spatial disparities in health-care access impact human health, urban quality of life, justice and social cohesion?
- How has the outcome of historical events (including cultural heritage and cultural political history) impacted the spatial distribution of welfare and well-being?

Against the background of these intriguing research challenges, the issue of policy is at stake. Smart governance should be a main topic, and demonstrate that Regional Science can be an effective tool for public policy practitioners. In this sense, there should be a discussion, for instance, on what kind of regional policy, where, for whom (including the role of cities, regions, nations and institutions embedded in the best governance structure possible), and how can we plan for spatially oriented outcomes under unstable and informal economic relations?

In conclusion, the Regional Science Academy would have to adopt an operational approach through which it could promote consistency between techniques, methods, models and theories, promote effective interaction with students and society, and produce sound scientific responses to urgent territorial problems of our planet.

Curriculum Development

The future of Regional Science depends on the quality of its education. The Regional Science Academy should pursue leadership to create a formal curriculum to be followed by schools to become recognised via a certification in Regional Science. In this sense, Regional

Science still lacks official accreditation, and the Regional Science Academy may promote it by designing and creating a system for certificates. Training students in an international accredited program will improve the value added and the academic recognition of the discipline, which will likely have the long term effect of increasing resources for education and research, and bringing more 'cache' for both teachers and institutions involved in the discipline.

The educational system proposed must be complemented by the promotion of workshops, textbook series, and curriculum development, among others. In this context, the Regional Science Academy needs to encourage effective interaction with students and society at large. It can also create a network of Regional Science schools, where people from other places can join and credits can be recognized for relevant courses (for example sandwich programs at the Master and Ph.D. levels could be a good way to start, as well as the engagement of visiting scholars). The Regional Science Academy could also work as a bridge between different actors in Regional Science, especially in relation to job openings and post-doc opportunities, and potential candidates. This network has to be a living entity, with its own demography, and an openness to participation by new schools. As mentioned previously, the Regional Science Academy may support existing institutions in Regional Science already promoting education (such as the RSAI). In this line, there is already a list of Regional Science schools⁵ where education of Regional Science is taking place (for instance, the current criterion is to have 3 PhDs in Regional Science in recent years).

Moreover, the Regional Science Academy should strengthen the field of Regional Science in a worldwide context, and based on that, it could create an international qualification system for recognised Regional Science courses all over the world. This system could then contribute to the recognition of classical and traditional departments (and their curricula) in universities. Such

⁵ http://www.regionalscience.org/index.php?option=com_k2&view=itemlist&layout=category&task=category&id=156&Itemid=735

curricula should favour an interdisciplinary spirit in the spatial sciences.

In addition, the Regional Science Academy itself could provide professional training in very specific skills for the research community, such as how to fundraise for networking and collaborative opportunities (i.e. workshops, conferences, etc). Its online platform could provide an environment to exchange experiences, and articulate the demand of different actors from different backgrounds.

Data Warehouse

Another main element of the Regional Science Academy concerns the modern trend in science dynamics which is centered on the development of coherent research fields, driven by infrastructure facilities and large data. In many ways it would further recent research calls for Open Regional Science⁶. This calls for new ideas on common data infrastructures and software, based on smart data warehousing for learning, observing and analysing the regional and urban dynamics around the world. An effectively coordinated exchange vehicle in the form of a virtual data hub is needed to provide and to facilitate information (e.g., by developing 'Spatial Big Data' software for information and knowledge initiatives and users). This would be a challenging issue that falls within the ambit of the Academy, for both the scientific community and the users at large. It will help to stimulate a wide variety of (multi) disciplinary orientations and domains, by addressing emerging relevant phenomena and analysing spatial patterns within the worldwide Regional Science community, (and spatial scientists in a more general sense). Furthermore, it will yield new insights and will simultaneously highlight a variety of ways to explore roadmaps for future Regional Science research and to create possibilities for discovering and for estimating 'unknowns', in combination with powerful analysis tools.

General Service Provision

The Regional Science Academy may also be seen as a general facilitator for emerging new activities. Examples of such novel activities are:

- Strategies for better knowledge dissemination (e.g. e-platforms);

- Inclusion of Regional Science as one of the descriptors in the OECD database⁷;
- Development of transformative ideas (e.g. scenarios) on the new spatial structure of our planet;
- Enhancement of liaisons with international bodies (World Bank, UN, OECD, EU, NGOs, etc.);
- Formulation of a 'code of conduct' for regional science research;
- Systematic fund raising from donors;
- Marketing of Regional Science in a global knowledge society, through externally-oriented websites.

Where does the development of the Regional Science Academy stand at this moment? First, there appears to be overwhelming international support for this new concept. Second, various Regional Science councils (e.g., ERSAC, RSAIC) have already indicated they will endorse and welcome this initiative as a major strategic vehicle for a vibrant Regional Science community. Third, at the forthcoming NARSC conference in Portland (November 2015), the final steps will be taken towards a formalisation of all these ideas. And finally, last but not least, the Academy's work plan is in full swing and will include shortly some path-breaking new initiatives, e.g., 'Spatial Big Data', 'Science of the City', 'It's a Small World' and 'Homo Mobilis'. More information can soon be found on the Regional Science Academy website (shortly operational).

8. Centres of Regional Science: The Research Centre for Macroeconomic and Regional Forecasting (PROMAR), Bucharest University of Economic Studies

by Prof. Dr. Daniela L. Constantin, *Director of PROMAR*
(daniela.constantin@ase.ro)

The Research Centre for Macroeconomic and Regional

⁶ Western Regional Science Association (WRSA) Presidential address by Sergio J Rey. See "Open regional science" in the *Annals of Regional Science* (2014) Issue 52, 825-837.

⁷ See website: <http://ips-science-help.thomsonreuters.com/incitesLive/globalComparisonsGroup/globalComparisons/subjectAreaSchemesGroup/ecd.html>

Forecasting (PROMAR) was set up within the Bucharest University of Economic Studies at the beginning of 2007. It covers a large research area in the field of macroeconomic analysis and forecasting (sustainable economic growth, macroeconomic correlations, sectorial correlations, international flows, European integration, etc.) as well as in the field of regional economics and forecasting (regional growth, convergence – competitiveness – territorial cooperation, regional employment, internal and external migration, investment impact, environmental sustainability, institutional issues, etc.), employing as the main tools empirical analysis, econometric modelling, scenario-based methods, international comparisons, etc.



Its members are academics with top reputations in scientific research at the national level and with important visibility at the international scale. PhD students and MSc students are also involved in the Centre's activities. In total it counts 20 members, involved in many international projects (including the FP7 project "Growth – Innovation – Competitiveness: Fostering Cohesion in Central and Eastern Europe/GRINCOH", the ESPON project "Indicators and Perspectives for Services of General Interest in Territorial Cohesion and Development/SeGI", the DG REGIO project "The Objective of Economic and Social Cohesion in the Economic Policies of Member States", and the World Bank project "Geography of Crisis in Central and East European Countries"). The group also frequently joins national projects funded by the National Plan of Scientific Research and the National Council for Scientific Research in Higher Education (e.g. "Diminishing regional disparities as a basic condition for the economic and social cohesion. The quality of European integration", "Research regarding the involvement of Romanian universities in urban restructuring and regional development", "Economic and social analyses for underlying the spatial plans", "Inter-disciplinary approach regarding the improvement of living conditions via large housing estates rehabilitation in Romania" and so on).

The Centre's researchers have been actively involved in organizing the Romanian Regional Science Association conferences and the 2012 RSAI World Congress in Timisoara and have also participated in numerous ERSA and RSAI meetings.

The PROMAR Centre has established collaborative partnerships with other research centres within the Bucharest University of Economic Studies as well as with research institutes of the Romanian Academy, with the National Commission of Forecasting, the National Institute of Statistics, the Ministry of Regional Development and Public Administration. At international level, co-operation agreements have been established with the Regional Economics Applications Laboratory (REAL) of the University of Illinois at Urbana-Champaign –US, the Research Centre for Regulatory Science of the George Mason University, US, Department of Economic Geography and Geoinformatics of Wirtschaftsuniversitaet Vienna, Austria.

In the next few years the PROMAR Centre aims to attract new promising young researchers among its members and to enlarge and consolidate the research networks established with Romanian and foreign partners so as to have further successful participations in nationally and EU-funded projects.



PROMAR members at a project meeting

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RSAI MEMBERSHIP INFORMATION

All RSAI members have online access to the **Papers in Regional Science (PiRS)** and to the **Regional Science Policy and Practice (RSP)**: Journals of the Regional Science Association International. Members will need to log in to access full text articles Online.

RSAI NEWSLETTER, the newsletter of the Association, appears two times a year and contains information about upcoming conferences and meetings, recent publications and a periodic guide to graduate programs in regional science. Please send all electronic submissions of material for the RSAI Newsletter directly to andrea.caragliu@polimi.it and/or G.P.Clarke@leeds.ac.uk.

Participation in national and international meetings is encouraged; over twenty international, national and regional meetings are held each year. Two of the Association's superregional organizations, the **North American Regional Science Council (NARSC)** and the **European Regional Science Association (ERSA)** hold annual meetings in November and August. The third superregional organization, the **Pacific Regional Science Conference Organization (PRSCO)**, holds a meeting every two years.

Each year, the Association conducts a competition for the best doctoral dissertation in the field of regional science. Winners are encouraged to present their work at one of the major international meetings.

In addition to the RSAI publications, members are offered an opportunity to purchase other regional science journals at reduced rates and participate in the national and international conferences at reduced rates.

RSAI membership has its benefits and privileges, including:

- Right to vote for representation of the Council of the Regional Science Association International
- Eligibility for awards of RSAI
- Discounted registration fees at conferences organized by RSAI, NARSC, ERSA, PRSCO, and RSAmericas
- RSAI newsletter
- Participation in and access to a worldwide network of 4500 regional scientists
- Complimentary electronic access to the two journals of RSAI, Papers in Regional Science, and Regional Science Policy and Practice. Access to these journals is possible through your RSAI member access portal.
- Complimentary electronic access to the following journals, Journal of Regional Science, Growth and Change, Geographical Analysis and International Journal of Urban and regional Research. Access to these journals is possible through your RSAI member access portal.

For details on how to become a member, contact the Executive Director at rsai@apdr.pt or visit www.regionalscience.org.

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