

NEREUS

Núcleo de Economia Regional e Urbana
da Universidade de São Paulo



**PRINCETON
UNIVERSITY**



How to Enjoy a Sabbatical

(Reflections on the past 18 months in Princeton)

*Encontros Semanais NEREUS
São Paulo, 10 de Agosto de 2015*

Eduardo A. Haddad

Professor of Economics, University of São Paulo, Brazil

Outline

✓ Initial considerations

Academic activities

The agenda ahead

What do we gain?

Accelerate development

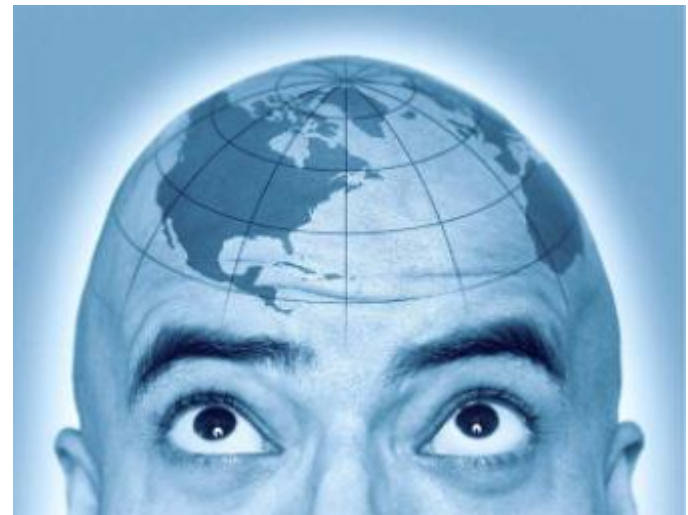
Stretch different muscles

Get out of comfort zone

Learn different capabilities

Global experience

Open new possibilities



Some guidelines

Select an interesting project*

[Select an interesting place – location matters!]

Establish realistic goals*

Prepare for the challenge ahead*

[Get your family involved]

Enjoy yourself!*

*Source: Sybil L. Holloway (<https://www.insidehighered.com/>)

Some personal insights

You need some time to settle down

Create a nice routine

Do things you would not do at home

Have a positive attitude towards different mindsets

Humble to begin from scratch

Appreciate the nuances of your new environment

Remember: it is a life experience [for the whole family!]

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Post-Doctoral Studies Activity Report – Summary



Back to school!

ECO 552 – “International Trade II”, Esteban A. Rossi-Hansberg and Eduardo Morales (Spring 2014)

WWS 582A – “Topics in Applied Economics – Urban Economics”, Esteban A. Rossi-Hansberg (Spring 2014)

ECO 551 – “International Trade I”, Gene M. Grossman and Stephen J. Redding (Fall, 2014)

AOS 577 / GEO 577 – “Climate of the Earth: Present, Past and Future”, Thomas L. Delworth (Fall, 2014)

The Classical Mediterranean MA DL, University of Leicester, UK (since Spring 2015)

International Economic Section (IES), Department of Economics, Princeton University

Attended the weekly research seminar series in international economics sponsored by the IES, ECO 581F – Trade Workshop (Spring and Fall, 2014; Spring 2015)

Attended the weekly IES Student Trade Workshop (Spring and Fall, 2014; Spring 2015)

Attended the 2014 Summer Workshop in Trade convened by IES

Attended the Integrated Assessment Modeling Seminar series, sponsored by the Climate Futures Initiative (CFI) at the Princeton Environmental Institute (PEI). (Fall 2014; Spring 2015)

Edward J. Bloustein School of Planning and Public Policy, Rutgers University

Courses (teaching):

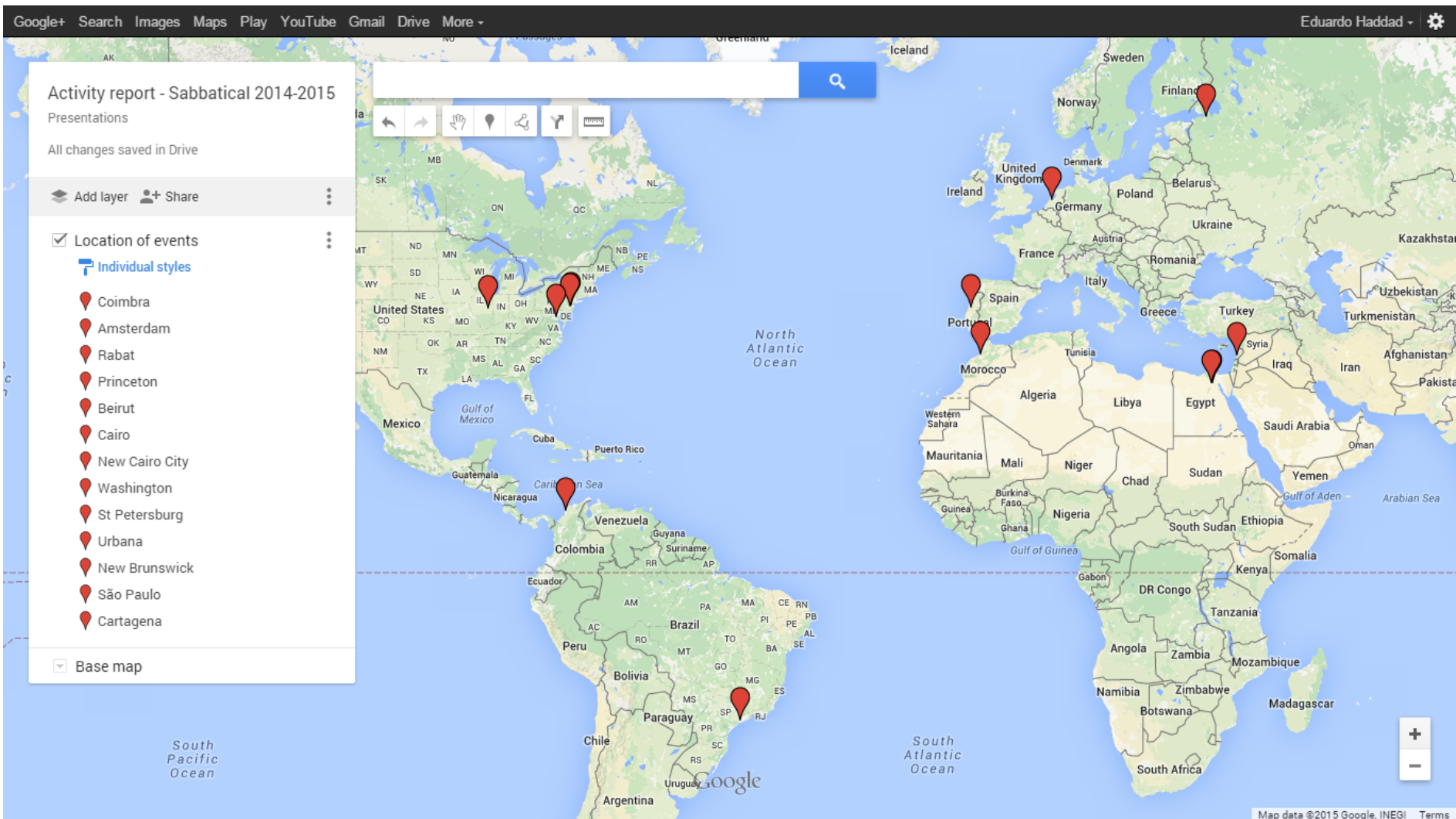
Graduate course: "Regional Economic Methods" (Spring 2014)

Undergraduate course: "Let the Games Begin: The Socio-Economic Effects of Mega-Events in Sports – Byrne Seminar" (Fall 2014)

Co-advising:

Dina Elshahawany

Seminars, Lectures and Conferences – 2014-2015



Group 1 – Mobility in Metropolitan Systems

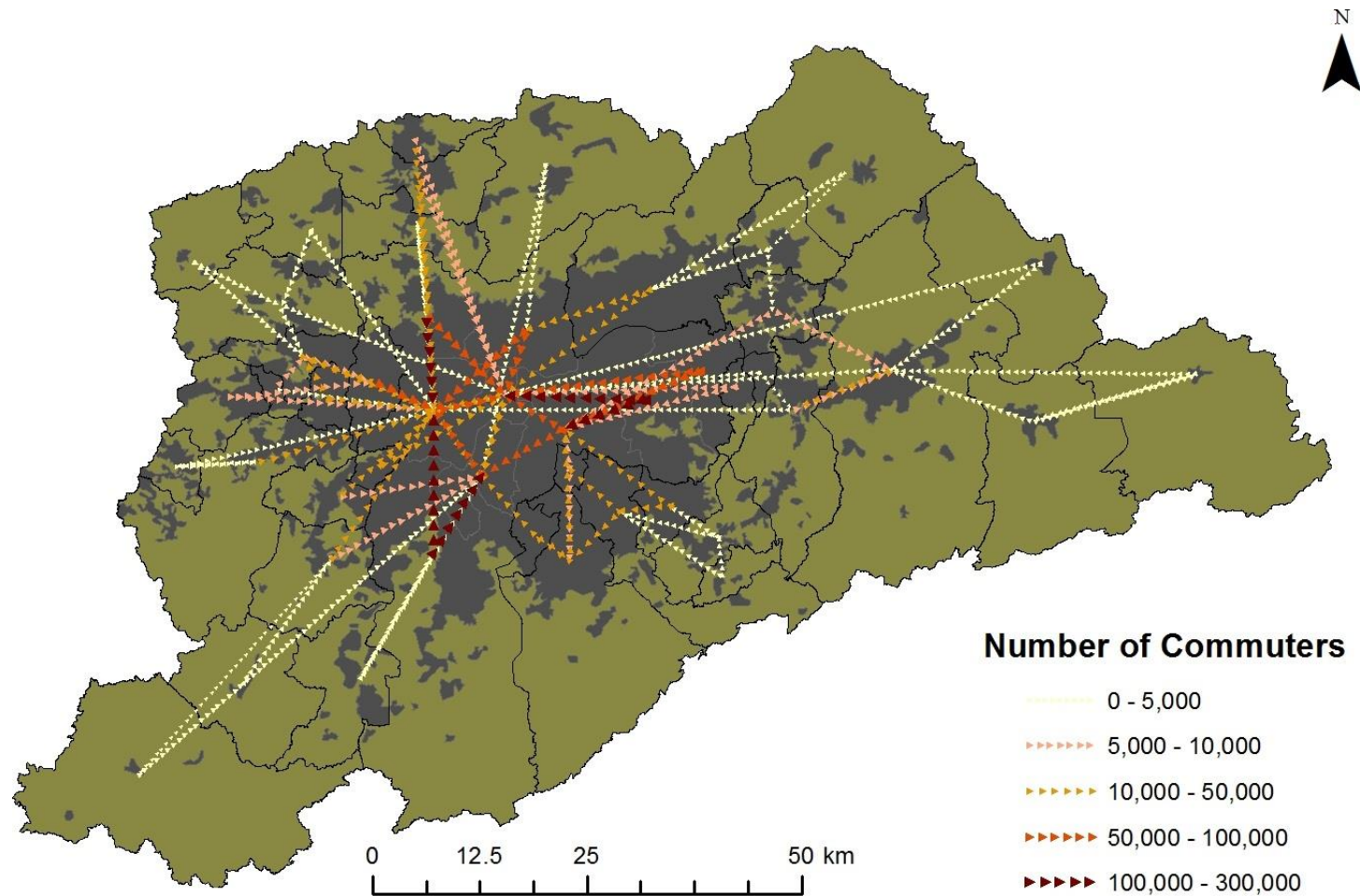
The Underground Economy: Tracking the Wider Impacts of the São Paulo Subway System (with Geoffrey J. D. Hewings, Alexandre A. Porsse, Eveline S. Van Leeuwen, and Renato S. Vieira), *Transportation Research Part A: Policy and Practice*, v. 73, pp. 18-30, 2015.

An Accessibility Index for the Metropolitan Region of São Paulo (with Renato S. Vieira). In: K. Kourtit, P. Nijkamp and R. R. Stough (editors), *The Rise of the City: Spatial Dynamics in the Urban Century*, Cheltenham, UK: Edward Elgar Publishing, pp. 242-258, 2015.

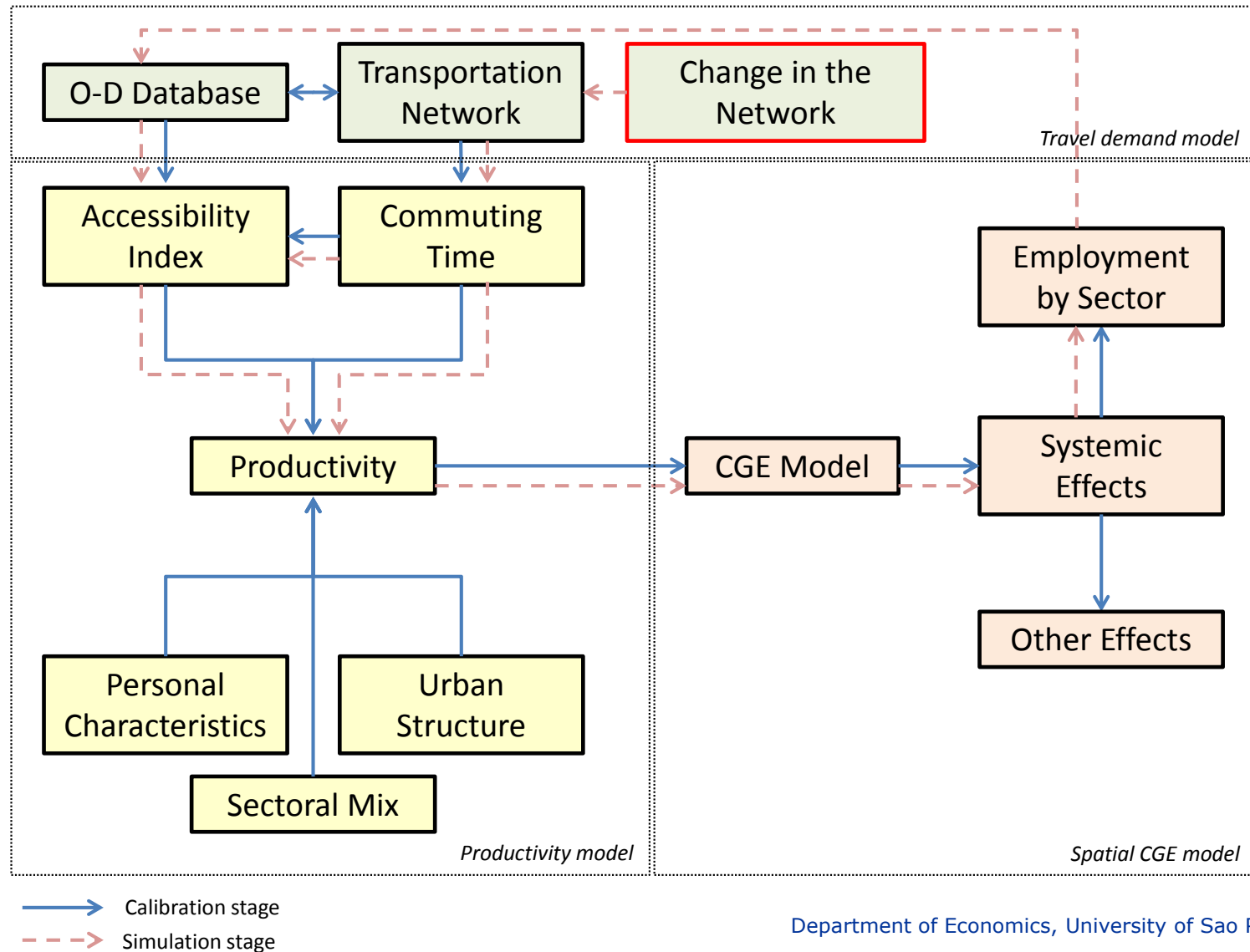
Mobilidade, Acessibilidade e Produtividade: Nota sobre a Valoração Econômica do Tempo de Viagem na Região Metropolitana de São Paulo (with Renato S. Vieira), submitted to *Revista de Economia Contemporânea*

WP: Mobility, Accessibility and Productivity in Metropolitan Systems: The Cost of Time (with Geoffrey Hewings, Eveline S. Van Leeuwen, Alexandre Porsse and Renato Vieira)

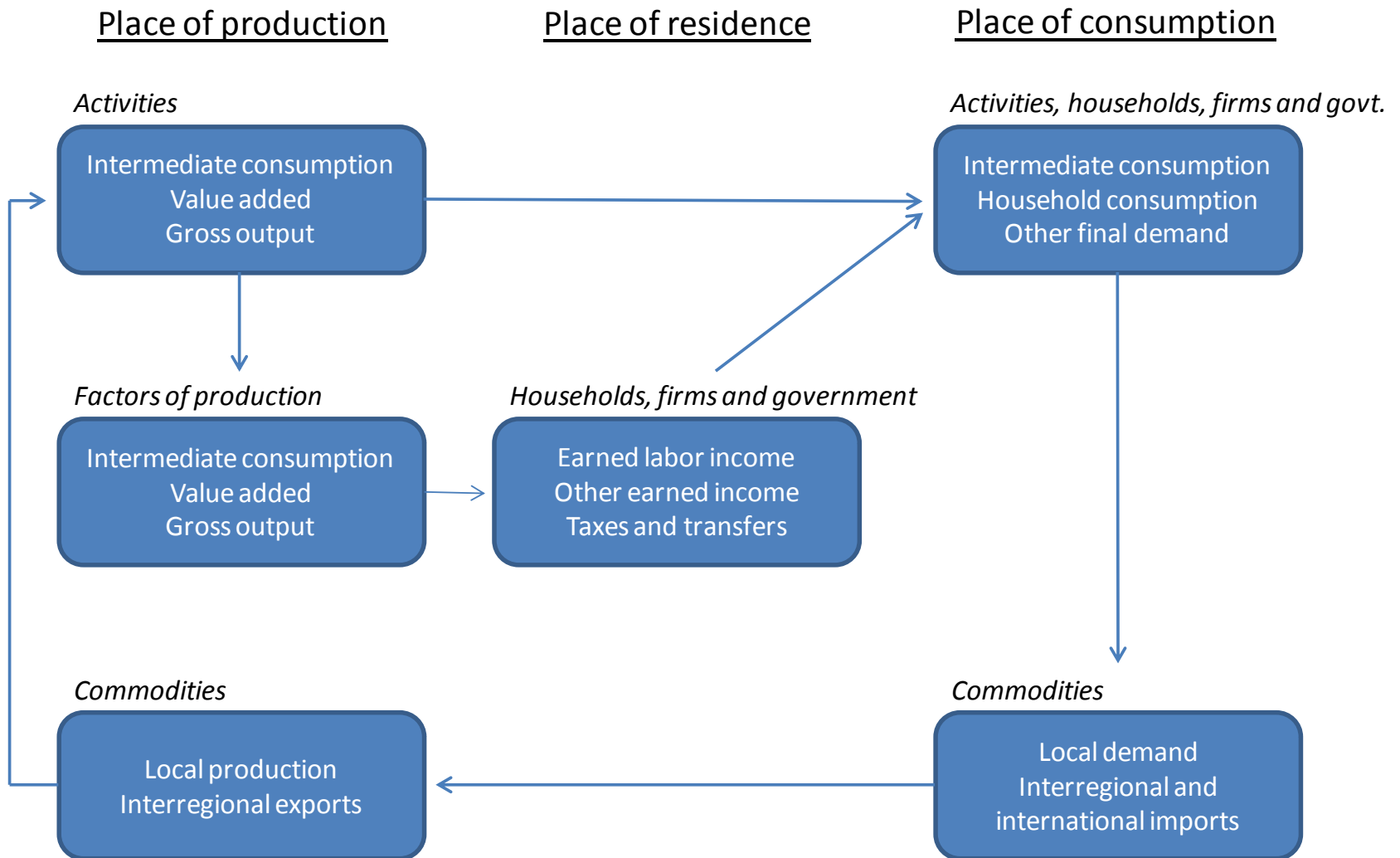
The city of São Paulo receives daily an inflow of almost one million commuters (15.4% of workers in the city)



The integrated modeling framework



Input-output relations embedded in the SCGE model



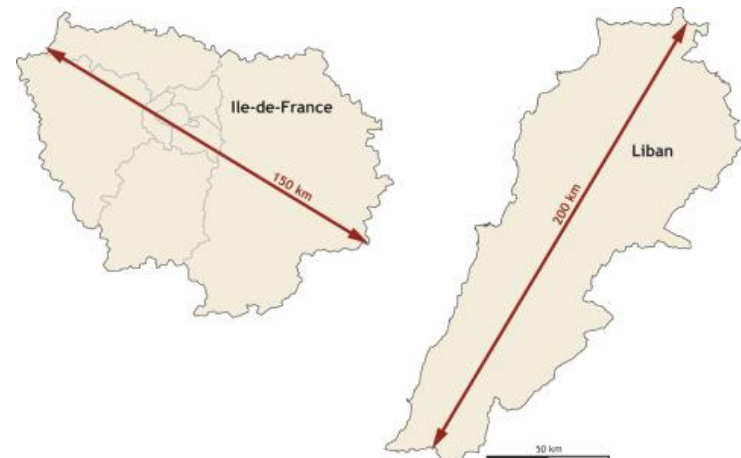
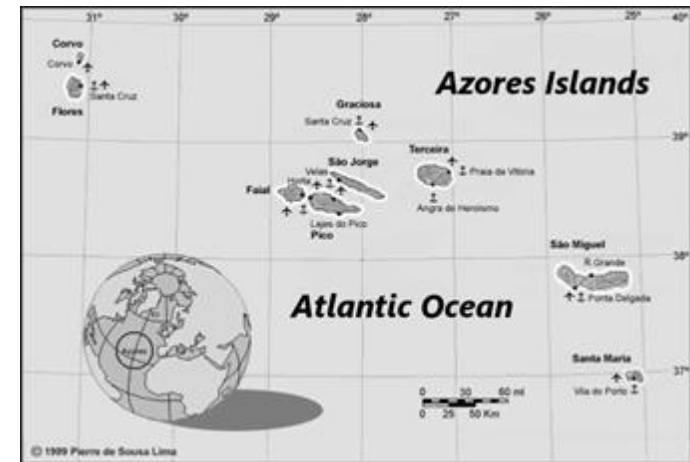
Group 2 – Input-Output Applications

Typology of Propagation of Technology and Social Preferences in the Process of Economic Development: An Input-Output Approach (with Weslem R. Faria and Joaquim J. M. Guilhoto), *Journal of Economic Studies*, v. 41, pp. 569-585, 2014.

Multipliers in an Island Economy: The Case of the Azores (with Vasco Silva, Alexandre Porsse and Tomaz Dentinho). In: A. A. Batabyal and P. Nijkamp (editors), *The Region and Trade: New Analytical Directions*, World Scientific, 2015 (forthcoming).

Consumo de Energia Elétrica das Exportações Brasileiras: Uma Análise Sistêmica por Área de Concessão de Distribuição (with Maria Carolina Marques), revised and resubmitted to *Pesquisa e Planejamento Econômico*

Treatment of spatial information / spatial interaction



Group 3 – Impact of Natural Disasters

Economic Impacts of Natural Disasters in Megacities: The Case of Floods in São Paulo, Brazil (with Eliane Teixeira), *Habitat International*, v. 45, part 2, pp. 106-113, 2015.

Mapping Potential Economic Losses from Flood Points in the Municipality of São Paulo, 2008-2012 (with Eliane Teixeira), *Ambiente & Sociedade*, v. 17, n. 4, pp. 77-94, 2014.

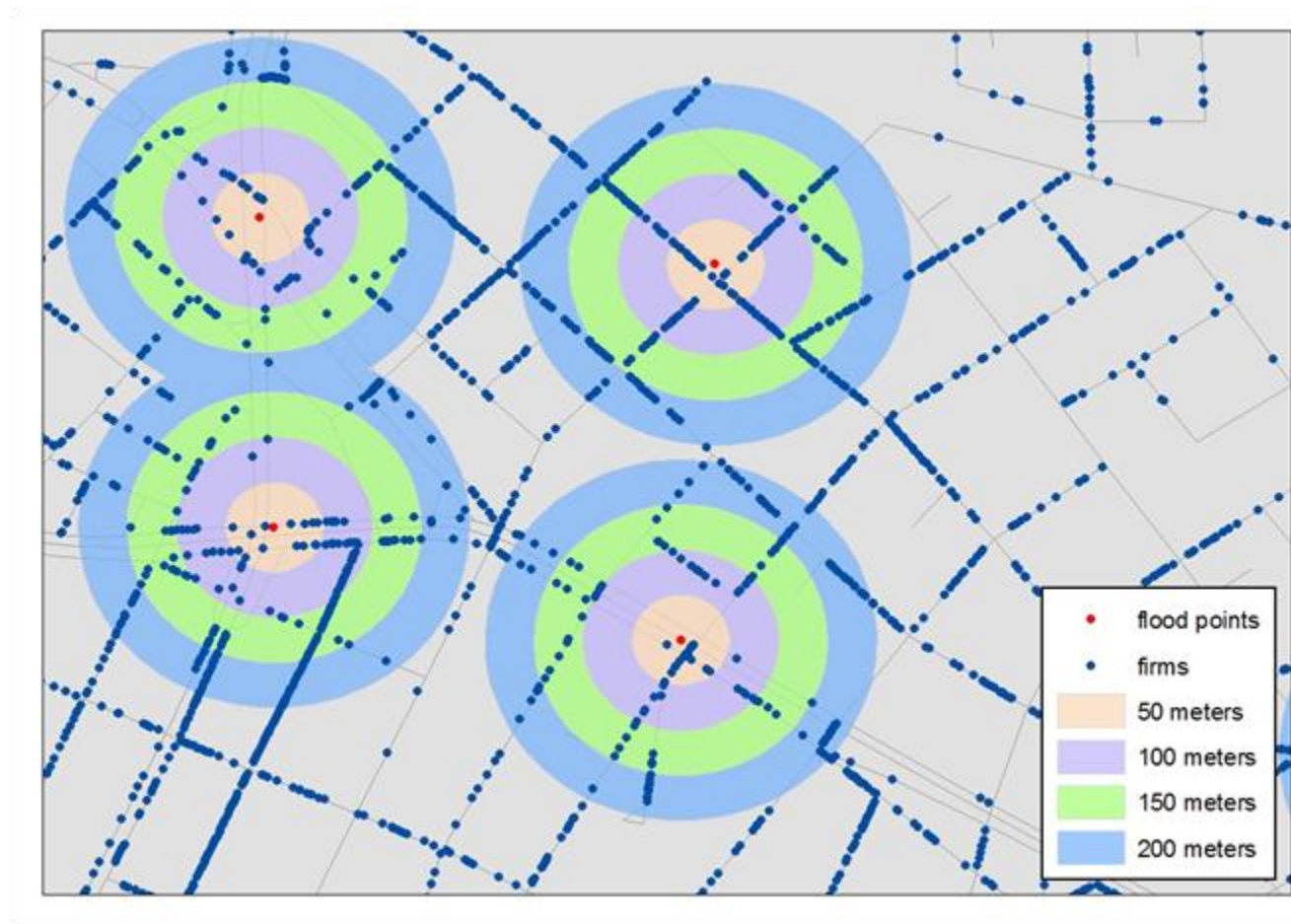
Floods are recurrent in São Paulo, especially in the summer

What are the economic costs of floods in São Paulo?

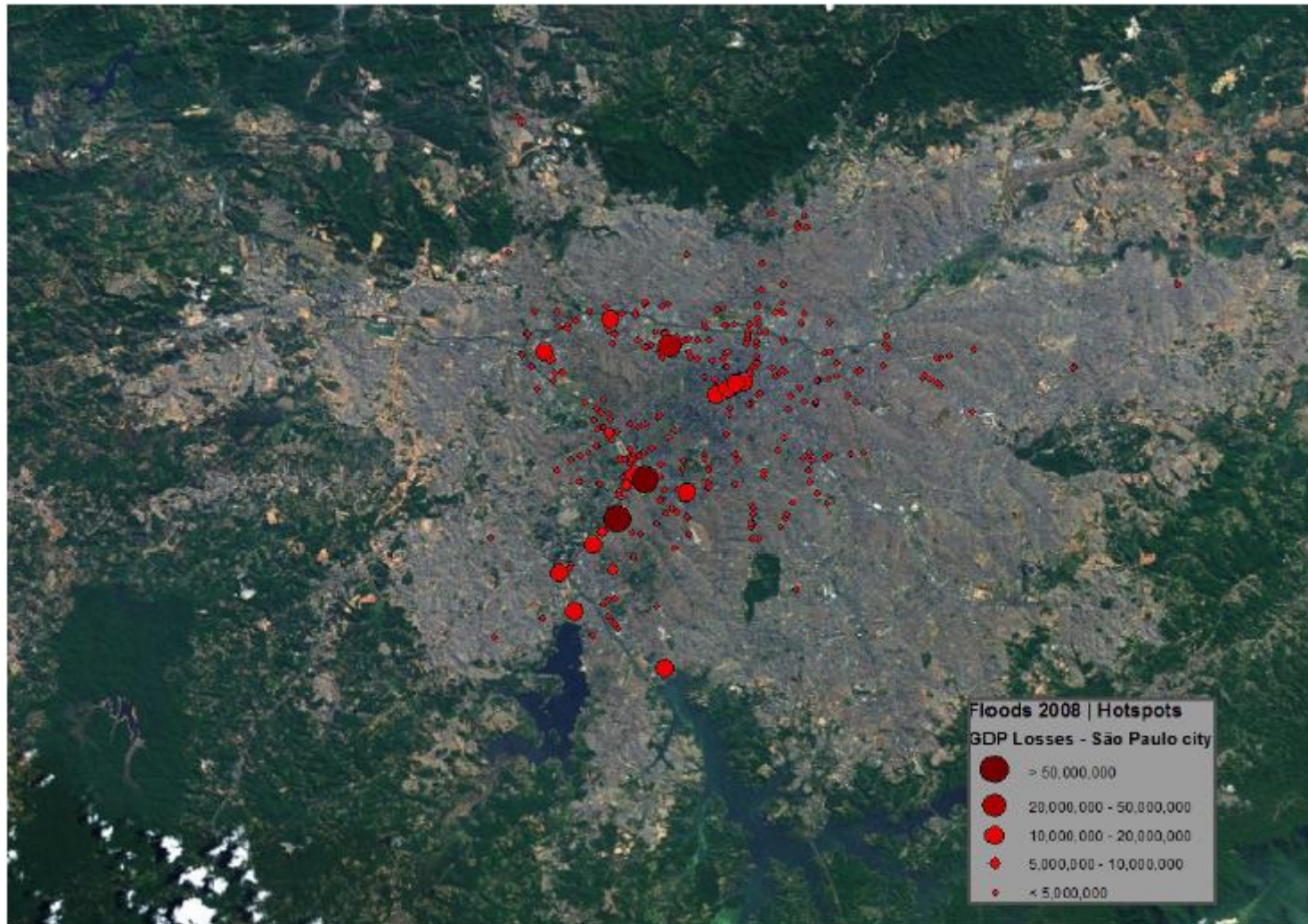


Haddad, E. A. and Teixeira, E. (2015). "Economic Impacts of Natural Disasters in Megacities: The Case of Floods in São Paulo, Brazil", *Habitat International*, 45, pp. 106-113

Example of GIS-based influence area of flood points, for different scenarios (50m, 100m, 150m, 200m)

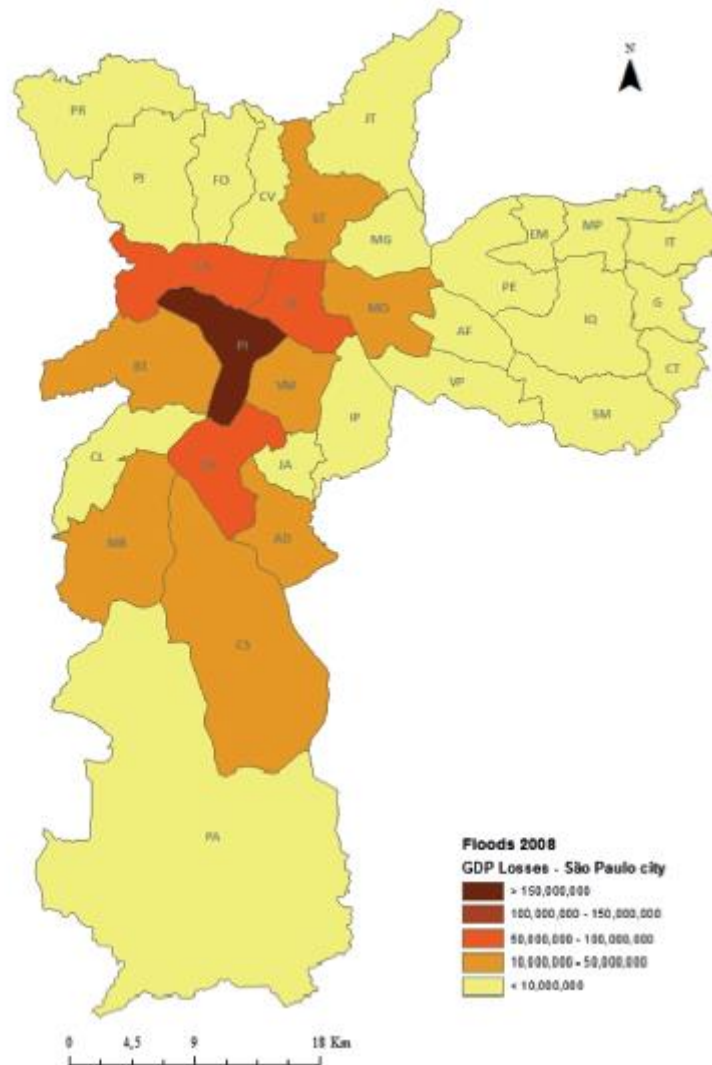


Reaching the planner: Hotspots 2008



Source: Teixeira and Haddad (2014)

Potential GDP losses in the São Paulo wards during 2008



Group 4 – Lebanon

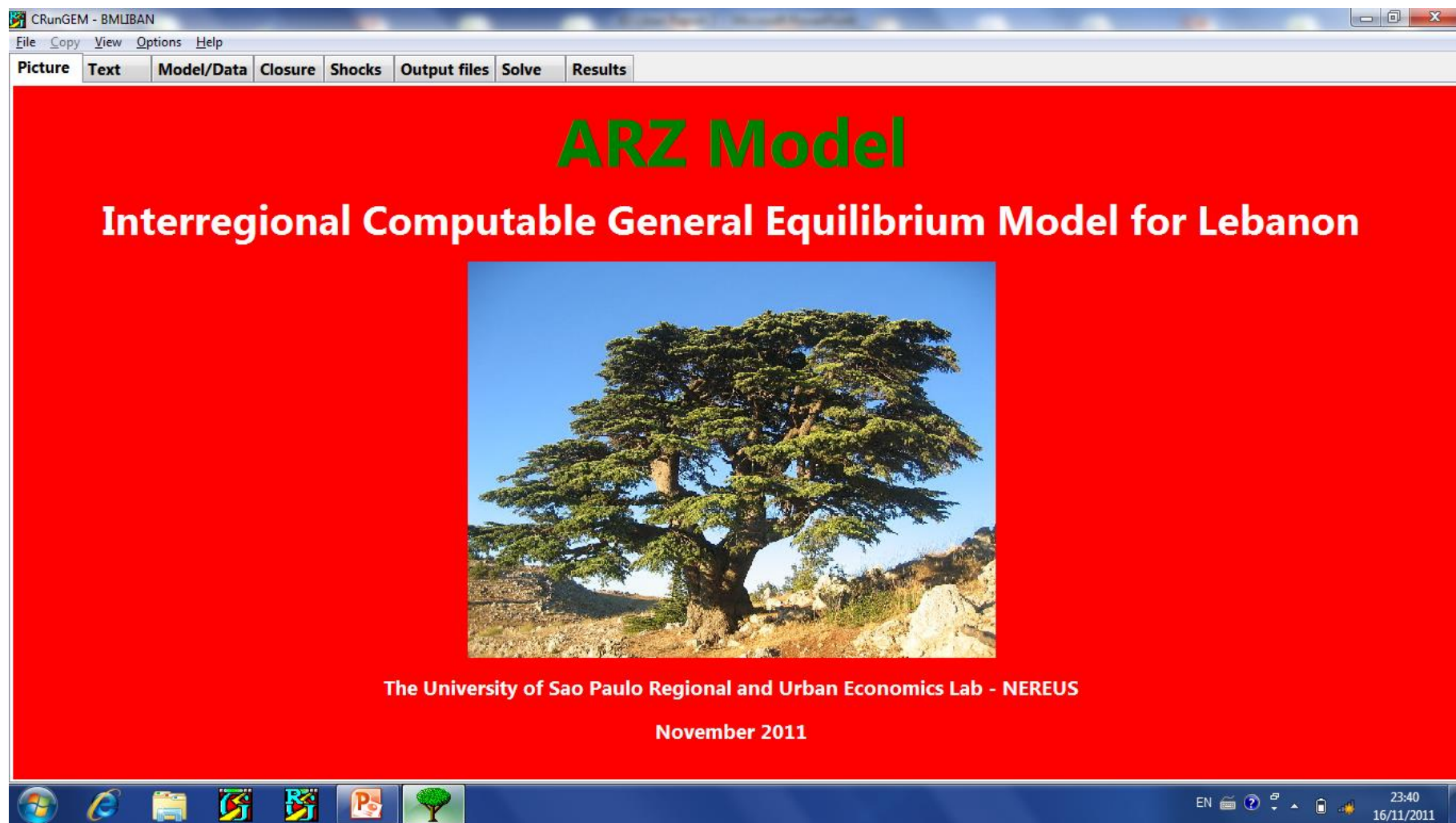
Spatial Perspectives of Increasing Freeness of Trade in Lebanon, *The Annals of Regional Science*, v. 53, n. 1, pp. 29-54, 2014.

Trade and Interdependence in Lebanon: An Interregional Input-Output Perspective, *Journal of Development and Economic Policies*, v. 16, pp. 5-45, 2014.

Climate Change in Lebanon: Higher-order Regional Impacts from Agriculture.(with Nadim Farajalla, Marina Camargo, Ricardo L. Lopes and Flávio V. Vieira), *REGION*, v. 1, n. 1, pp. 9-24, 2014 (inaugural article).

Spatial Propagation of the Economic Impacts of Bombing: The Case of the 2006 War in Lebanon, submitted to *Journal of Economic Structures*

The ARZ Project



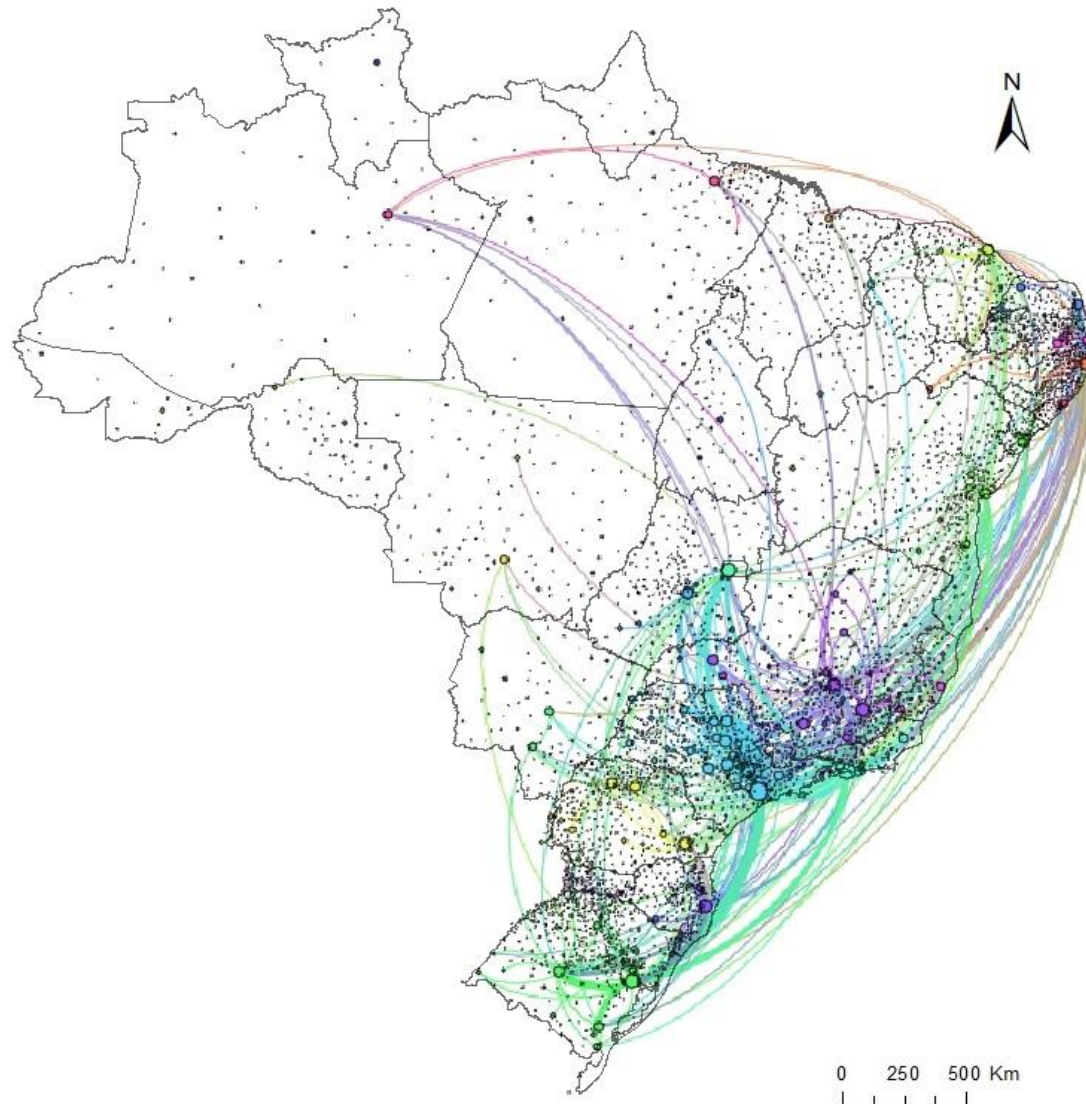
Group 5 – Scientific Networks

Scholarly Collaboration in Regional Science in Developing Countries: The Case of the Brazilian REAL Network (with Jesús Mena-Chalco and Otávio J. G. Sidone), revised and resubmitted to *International Regional Science Review*

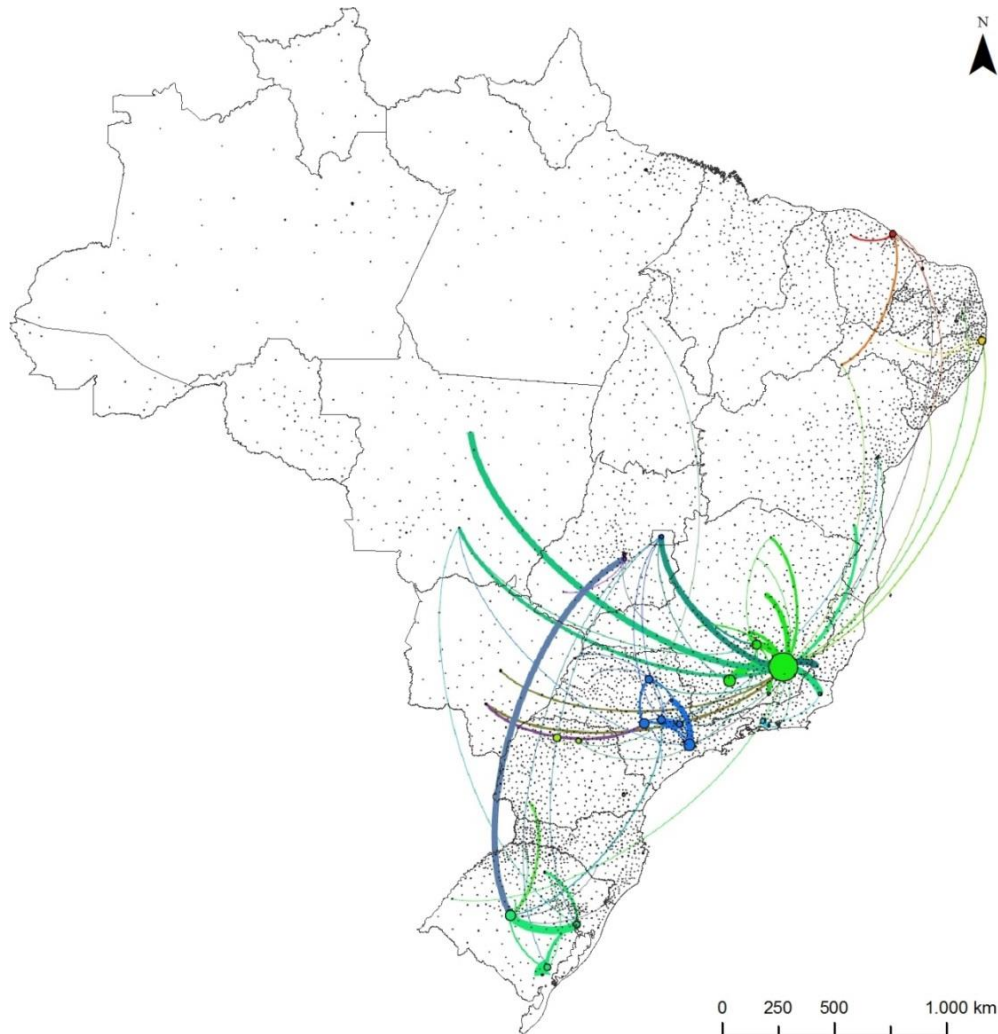
A Ciência nas Regiões Brasileiras: Evolução da Produção e das Redes de Colaboração Científica (1992-2009) (with Otávio J. G. Sidone and Jesús Mena-Chalco), forthcoming in *Transinformação*, 2015.

Scholarly Publication and Collaboration in Brazil: The Role of Geography (with Otávio J. G. Sidone and Jesús Mena-Chalco), revised and resubmitted to *Journal of the American Society for Information Science and Technology*

Knowledge flows in Brazil: 2007-2009

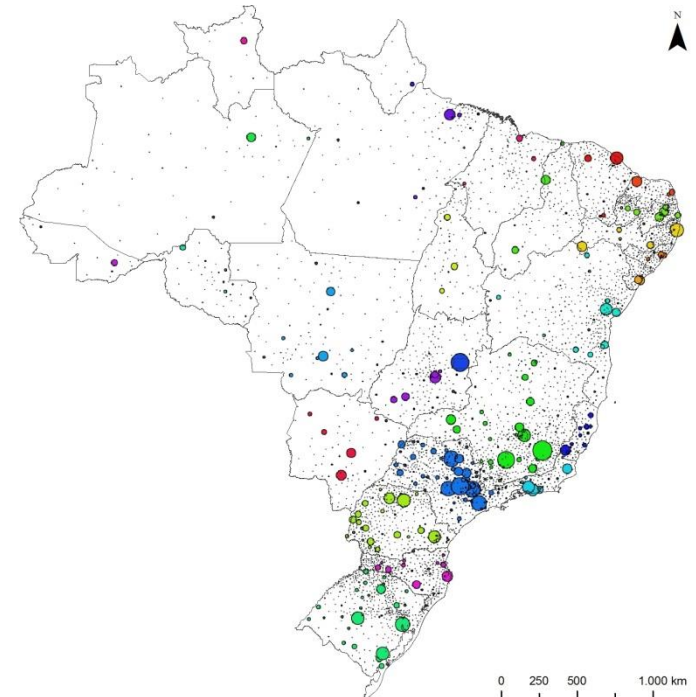


Co-authorship network: Agricultural Sciences (1990 -2010)

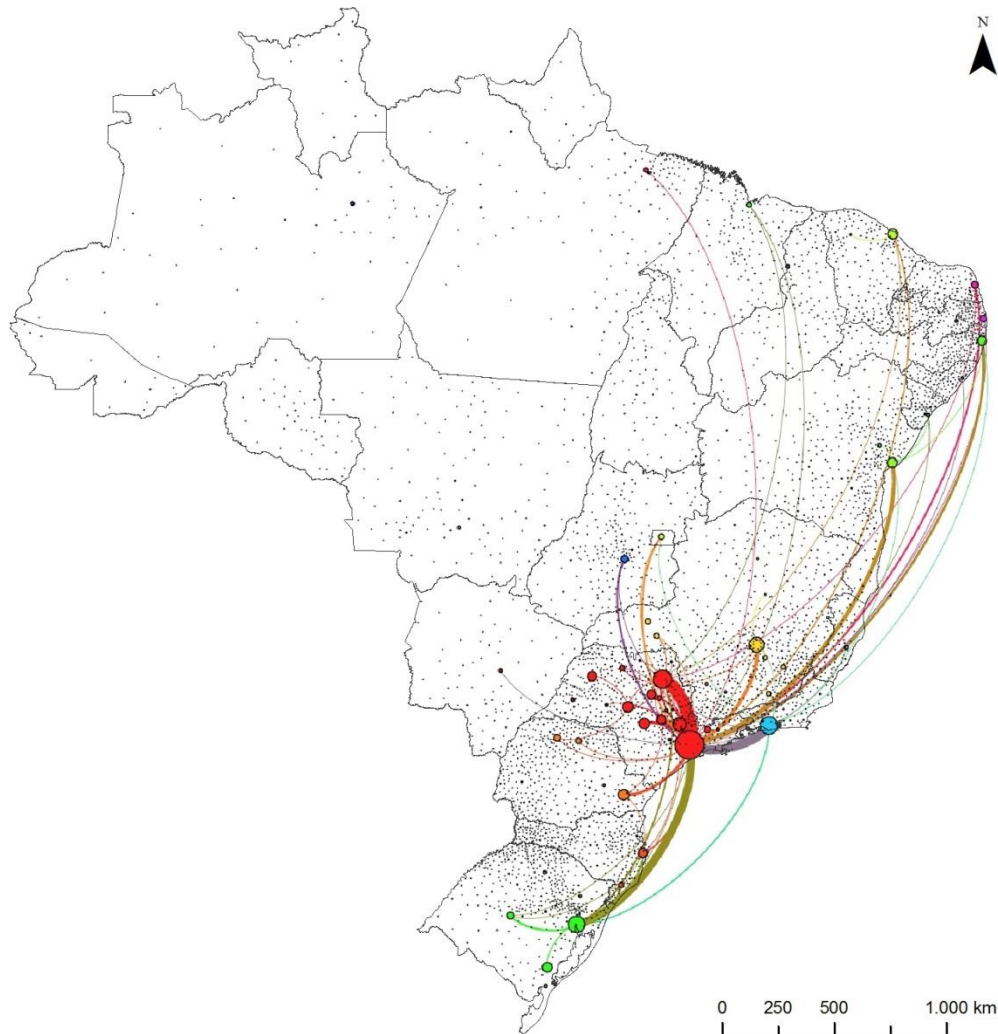


Capão do Leão/RS – Pelotas/RS	53.451
Piracicaba/SP – Campinas/SP	30.695
Lavras/MG – Viçosa/MG	29.334
Viçosa/MG	370.118
São Paulo/SP	143.982
Lavras/MG	143.559

Individual degree in the network

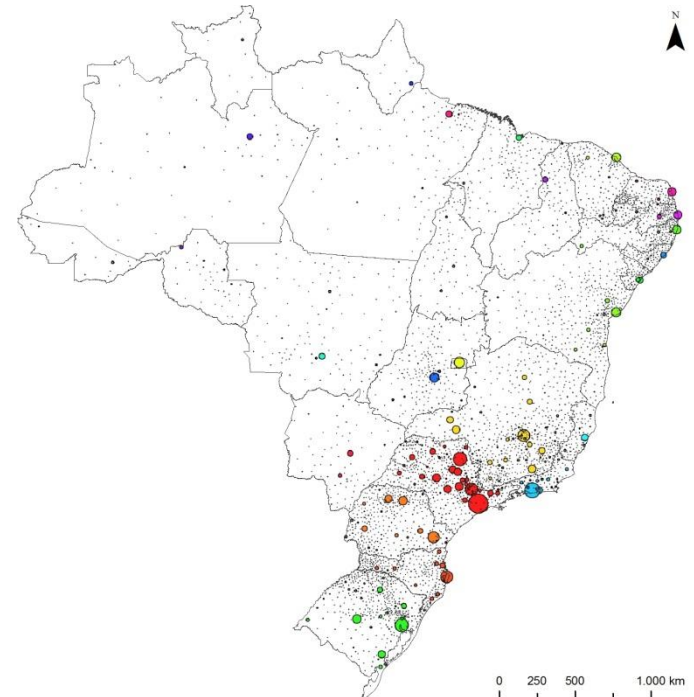


Co-authorship network: Health Sciences (1990 -2010)

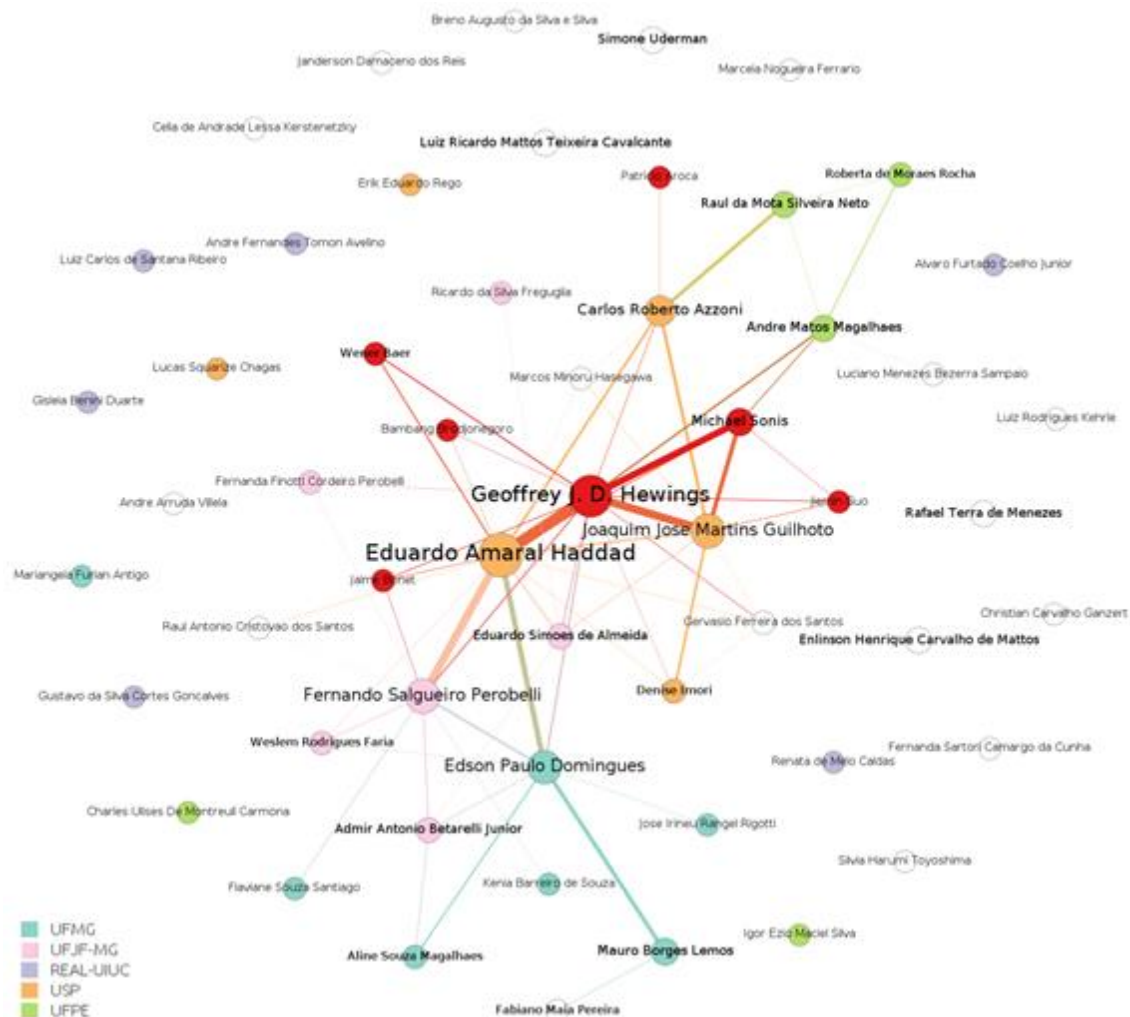


Ribeirão Preto/SP – São Paulo/SP	95.120
Campinas/SP – São Paulo/SP	78.023
Rio de Janeiro/RJ – São Paulo/SP	66.852
São Paulo/SP	2.220.749
Ribeirão Preto/SP	426.694
Rio de Janeiro/RJ	388.479

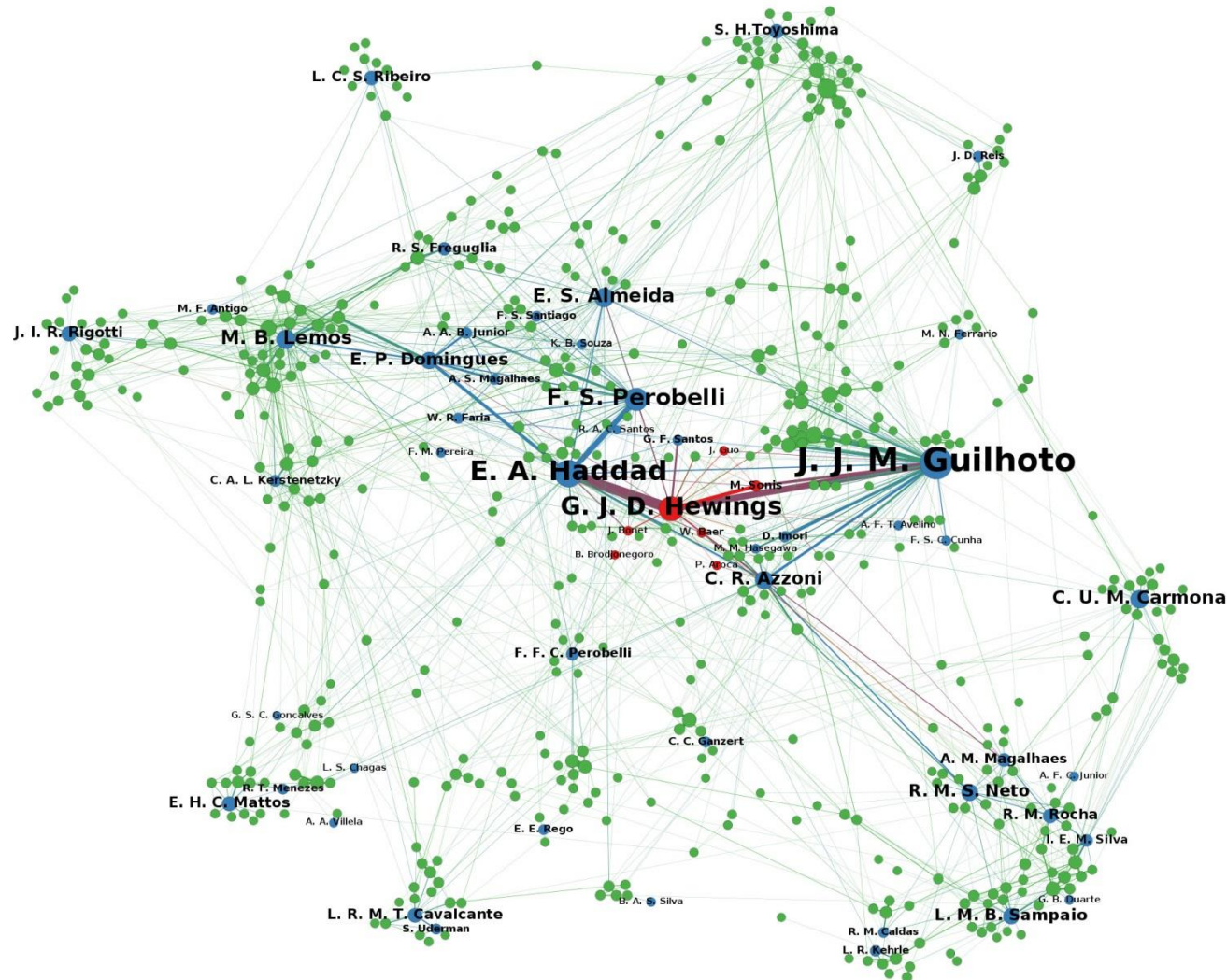
Individual degree in the network



Extended Endogenous Collaboration – Papers in Peer-Reviewed Journals and Chapters in Books, 1989–2013



Clusters in the Exogenous Collaboration Network, 1989–2013



Group 6 – Economics of Climate Change

Climate Change and Land Use Pattern in Brazil (with Eduardo Barbosa, José Feres and Antonio Paez), forthcoming in the volume *Innovations in Spatial Analysis and Location Modeling in Urban and Regional Systems*, Advances in Geographic Information Science Series, edited by Jean-Claude Thill, Springer-Verlag, 2015 (forthcoming)

Mensuração dos Efeitos de Mudanças Climáticas na Bahia (with Weslem R. Faria), *Bahia Analise & Dados*, v. 24, pp. 25-38, 2014.

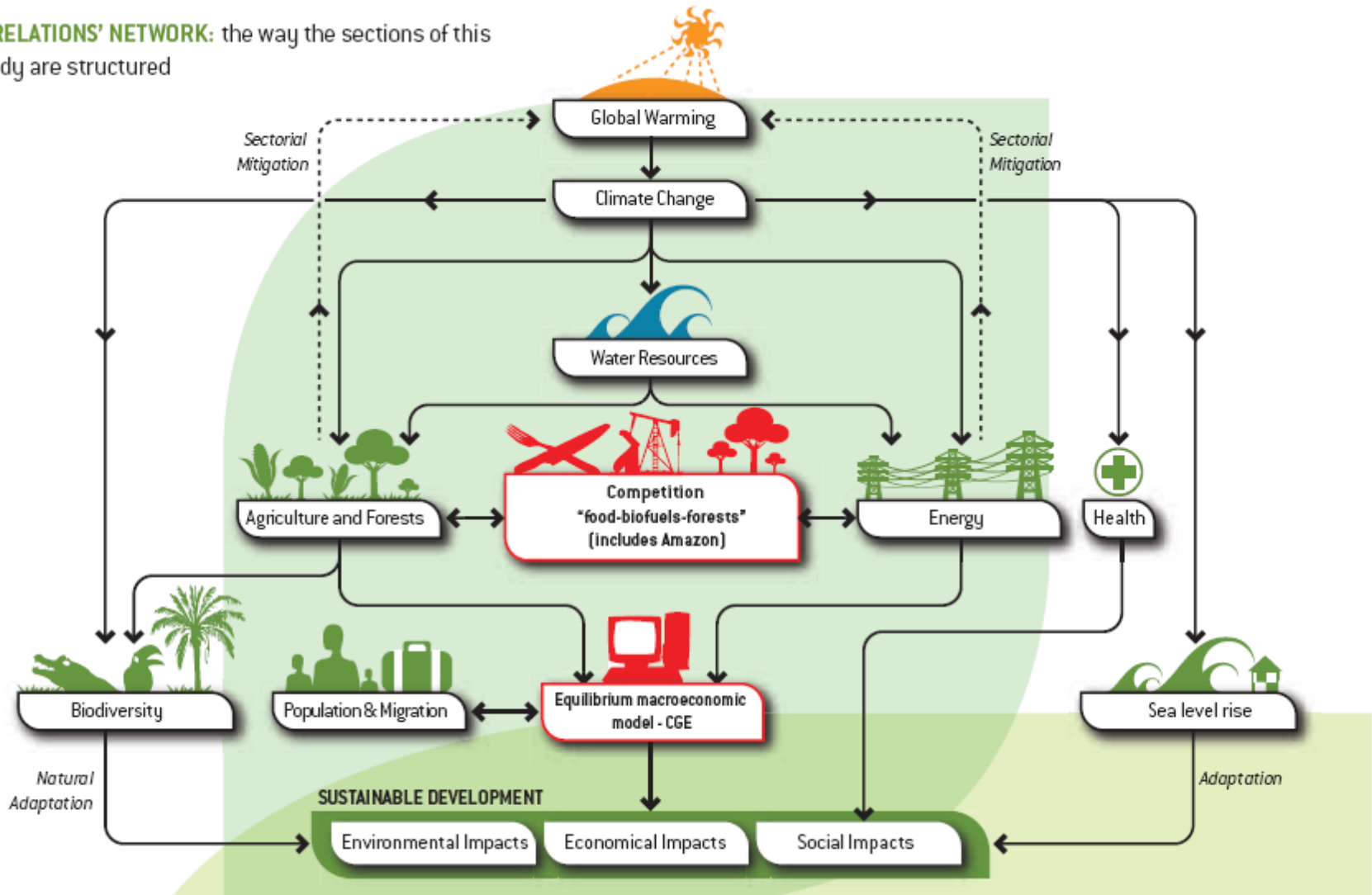
WP: Modelagem do Uso da Terra e Efeitos de Mudanças na Produtividade Agrícola entre 1996 e 2006 (with Weslem R. Faria)

WP: Modeling Land Use and the Effects of Climate Change in Brazil (with Weslem R. Faria)

WP: Economia das Mudanças Climáticas: A Experiência Brasileira com a Utilização de Modelos Integrados para Avaliação de Impactos de MCG (with Eliane Teixeira)

Economics of Climate Change in Brazil Modeling Logical Structure

A RELATIONS' NETWORK: the way the sections of this study are structured



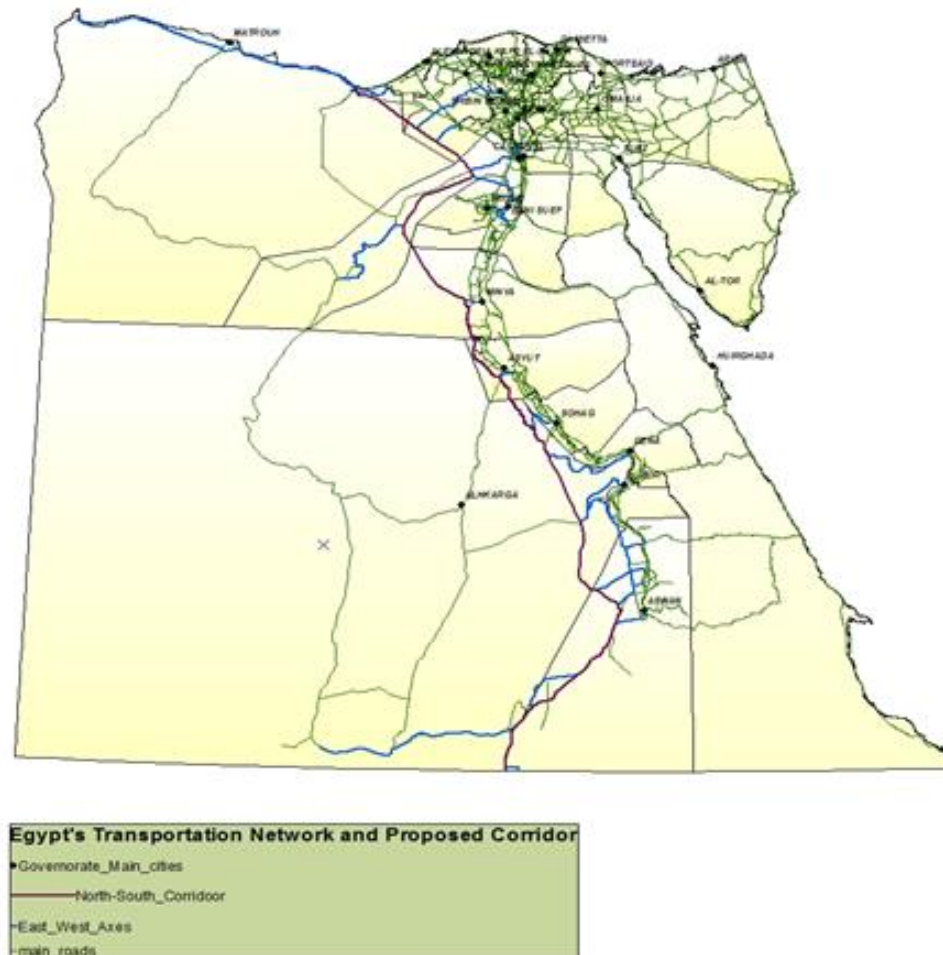
Group 7 – Transportation Infrastructure and Domestic Integration

WP: Regional Analysis of Domestic Integration in Egypt (with Michael Lahr, Dina N. Elshahawany and Moises Vassallo)

WP: The Potential Economic Impacts of the Proposed Development Corridor in Egypt (with Dina N. Elshahawany and Michael Lahr)

WP: Avaliação dos Impactos Espaciais do Sistema Viário Oeste – Bahia: Uma Abordagem a Partir da Modelagem de Equilíbrio Geral Computável (with Rodrigo Calabrich)

Egypt's Transportation Network after Connecting the Proposed Corridor



Sistema Viário Oeste



Trecho	Descrição
1	Construção da Ponte Salvador – Ilha de Itaparica (preto).
2	Duplicação da BA-001 entre os municípios de Vera Cruz e Nazaré (vermelho).
3	Duplicação da BA-028 trecho Nazaré – Santo Antônio de Jesus (azul).
4	Construção da ligação rodoviária entre Santo Antônio de Jesus e Castro Alves (verde).
5	Requalificação do trecho da ligação viária entre Castro Alves e a BR-116 (marrom).

Group 8 – Methodological Experimentation with CGE Models

Economic Impacts of Natural Resources on a Regional Economy: The Case of the Pre-Salt Oil Discoveries in Espírito Santo, Brazil (with Ana Carolina Giuberti), *Economy of Region, Russia*, v. 1, pp. 111-124, 2014.

Target Fitting and Sensitivity Analysis in CGE Models: An Application for the Assessment of Regional Effects of Monetary Policy in Brazil (with Gabriel Garber), submitted to *Brazilian Review of Econometrics*

Group 9 – Various

Export Performance of Brazilian States to Mercosur and Non-Mercosur Partners (with Flávio V. Vieira and Carlos R. Azzoni), *Latin American Business Review*, v. 15, pp. 253-267, 2014.

Industrial Scope of Agglomeration Economies in Brazil (with Ana Maria Bonomi Barufi and Peter Nijkamp), revised and resubmitted to *Annals of Regional Science*

Interface of research interests – SPACE

		Methods				Fields				Regions			
		IO	CGE	INT	NET	CC	TRN	TRA	URB	MET	MED	BRA	MOC
Methods	Input-output (IO)												
	CGE model (CGE)												
	Modeling integration (INT)												
	Social networks (NET)												
Fields	Climate change (CC)												
	Transportation (TRN)												
	Trade (TRA)												
	Urban economics (URB)												
Regions	Metropolitan systems (MET)												
	Mediterranean (MED)												
	Brazil (BRA)												
	Morocco, Colombia (MOC)												

Outline

Initial considerations

Academic activities

✓ The agenda ahead

Ongoing research projects

Program in Regional Economics for Morocco (*OCP Policy Center*)

1. Regional information system for Morocco
2. Research theme 1: "Domestic and International Integration"
3. Research theme 2: "Regional Inequality"
4. Research theme 3: "Natural Resources"
5. Teaching component

Memorandum of Partnership Agreement (AUB-NEREUS)

1. Climate Change
2. Book project (Regional Science studies on Lebanon – Springer)

Zagazig University-Rutgers-NEREUS

1. Domestic Integration and Inequality in Egypt

Ongoing research projects

Mediterranean (partnerships for modeling)

1. *Portugal, Spain, France, Italy, Greece, Turkey, Lebanon, Egypt, Tunisia, Morocco*

Scientific networks

1. ANPEC
2. EAE

Colombia (*Banco de la Republica*)

1. Spatial CGE Model for Colombia
2. Government transfers

Interregional Government Transfers in Brazil: An Urban Accounting Approach

Ongoing research projects

Climate Change

1. Mitigation Options of Greenhouse Gas (GHG) Emissions in Key Sectors in Brazil (UNEP)
2. Rede Clima, INCT-MC, INCLINE

Alternative Approaches to Computable General Equilibrium Modeling of Interregional Systems: An Application to Brazil

Modeling of metropolitan systems

1. Commuting and value of time in space – RMSP
2. RM Campinas

Graduate students

Ana Barufi, Moisés Vassallo, Tales Rozenfeld, Thiago Nascimento

“Unconventional” research projects

Ancient World (The Classical Mediterranean)

- Networks (trade, migration)
- Urban systems

Destiny Studies

Ancient Urban Economics

The Pre-History of Urban Scaling

Scott

1 Depart
America,
of New

Quaternary Science Reviews 28 (2009) 3016–3034

Urban Connectivity of Iberian and Roman Towns in Southern Spain: A Network Analysis Approach

The Rise of Europe: Atlantic Trade, Institutional Change,

Analysing Ancient Economies and Social Relations

1

The Size of the Economy and the Distribution of Income in the Roman Empire*

WALTER SCHEIDEL AND STEVEN J. FRIESEN

1 OBJECTIVE

As Roman economic historians have moved beyond concepts such as formalism and substantivism that exercised previous generations of scholars, questions of economic growth and performance have increasingly come to the fore.¹ Consideration of these issues requires a basic understanding of the probable size of the Roman economy and the distribution of income across its population. This perspective not only encourages us to ask how different segments of the economy — such as the share of output captured by the state or the relative weight of elite wealth — were interrelated and to ponder the overall degree and

ORBIS – the Stanford geospatial network model of the Roman World

ORBIS The Stanford Geospatial Network Model of the Roman World

About TutorialWalter Scheidel
Elijah Meeks

RouteNetworkFlow

FROM: Alexandria

TO: Londinium

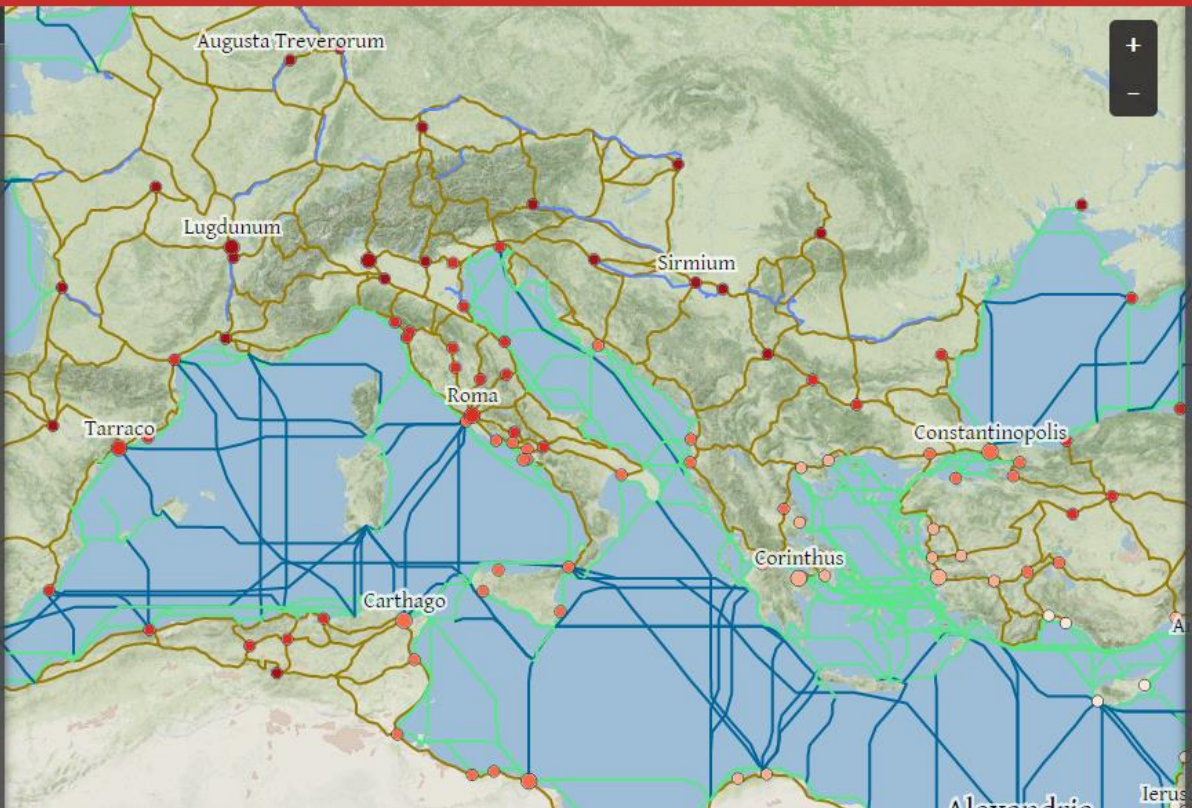
DEPARTING: MONTH SEASON
❄️ 🌱 ☀️ 🍂

PRIORITY: Fastest Cheapest Shortest

NETWORK MODES
☒ Road ☒ Coastal Sea
☒ River ☒ Open Sea
☐ High Resolution

MODE TRANSFER COST
ROAD Foot (30km/day)
RIVER Civilian 0
SEA Fast 0

Calculate Route



DISPLAY
☒ Terrain
☒ Sites
☐ Names
☒ Paths
☐ Regions
☐ All Sites

Select Sites
Reset Map
Cluster
History
Export SVG
Path Coloring

Tweet 4,019
27k
Like


According to the Fastest routes from **Alexandria** to the rest of the Roman world in **July**, sites are this far away.

The most distant major sites are:

- Londinium (47 Days)
- Lugdunum (37 Days)
- Corduba (36 Days)
- Mediolanum (31 Days)

CartogramZones

Distance from Alexandria



Days	7.0	14.0	21.0	28.0
Marker	+	+	+	+

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Pleiades – a community-built gazetteer and graph of ancient places

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a community-built gazetteer and graph of ancient places



Dynamic map application and page design by [Sean Gillies](#) for [ISAW](#). Ancient terrain basemap by [Ryan Horne](#) for [AWMC](#).

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search the 34,900 places

Internum Mare

Search

Destiny Studies

“It is the task of the next decades to discipline our understanding of our collective future. Traditional religions dwell on what happens to us as *individuals* long-term – in heaven or hell, for example, – but not on what happens to humankind collectively, here on earth long-term. A **new academic discipline** will develop as scholars pursue the art and science of looking ahead. It may be called Destiny Studies. It may be able to provide qualitatively new answers to the question: “What are we on Earth to do?” In academia, every university will have a Program in Destiny Studies. Are you going to be the ones to create your university’s Program in Destiny Studies?”

Robert Socolow, “Destiny Studies: A plausible element of the new Climate Futures Initiative at Princeton University”, October 2, 2014

Regional Science Academy

Mission statement

The **Regional Science Academy** is a service-oriented scholarly network for rethinking and managing the spatial dynamics of people and socio-economic activities in connected spatial systems of our Earth by:

- developing new interdisciplinary knowledge and knowledge initiatives for strengthening regions and cities as livable, vital and resilient places;
- creating and exploiting scientific synergy – and related smart governance action – on regional and urban development, from an economic, social, demographic, policy, cultural, logistic and innovative perspective at different spatial scale levels

Regional Science Academy

- Enhance the critical role of regions and cities world-wide as vital, livable and sustainable places with a high quality for living and working.
- **Develop the foundations for an integrated regional theory and methodology.**
- Design socio-economic, ecological and planning ground research that is policy-oriented and innovation-driven.
- Provide the scholarly and policy tools for developing, assessing and aiding effective implementation of research, with a view to future challenges for regions and cities all over the world.
- Develop communication mechanisms for sharing the knowledge base in the regional science field, in particular by addressing novel and path-breaking perspectives on regional science research.
- Act as an intellectual platform for exchanging creative knowledge on regional and urban development, in cooperation with a younger generation.

Research Grants

São Paulo Research Foundation (FAPESP) Scholarships abroad – Research, January 01, 2015 - June 30, 2015 (Grant # 14/25030-2)

Brazilian Research Council (CNPq) Productivity Grant 2015-2018 (CNPq # 305137/2014-0)

Byrne Seminar Stipend – Fall 2014, Rutgers University (#662535)

Brazilian Research Council (CNPq) Post-Doctoral Fellowship, January 01, 2014 - December 31, 2014 (CNPq # 229256/2013-9)

São Paulo Research Foundation (FAPESP) Research Projects – Regular Grant, 2013-2015 (Grant # 2013/00894-1)

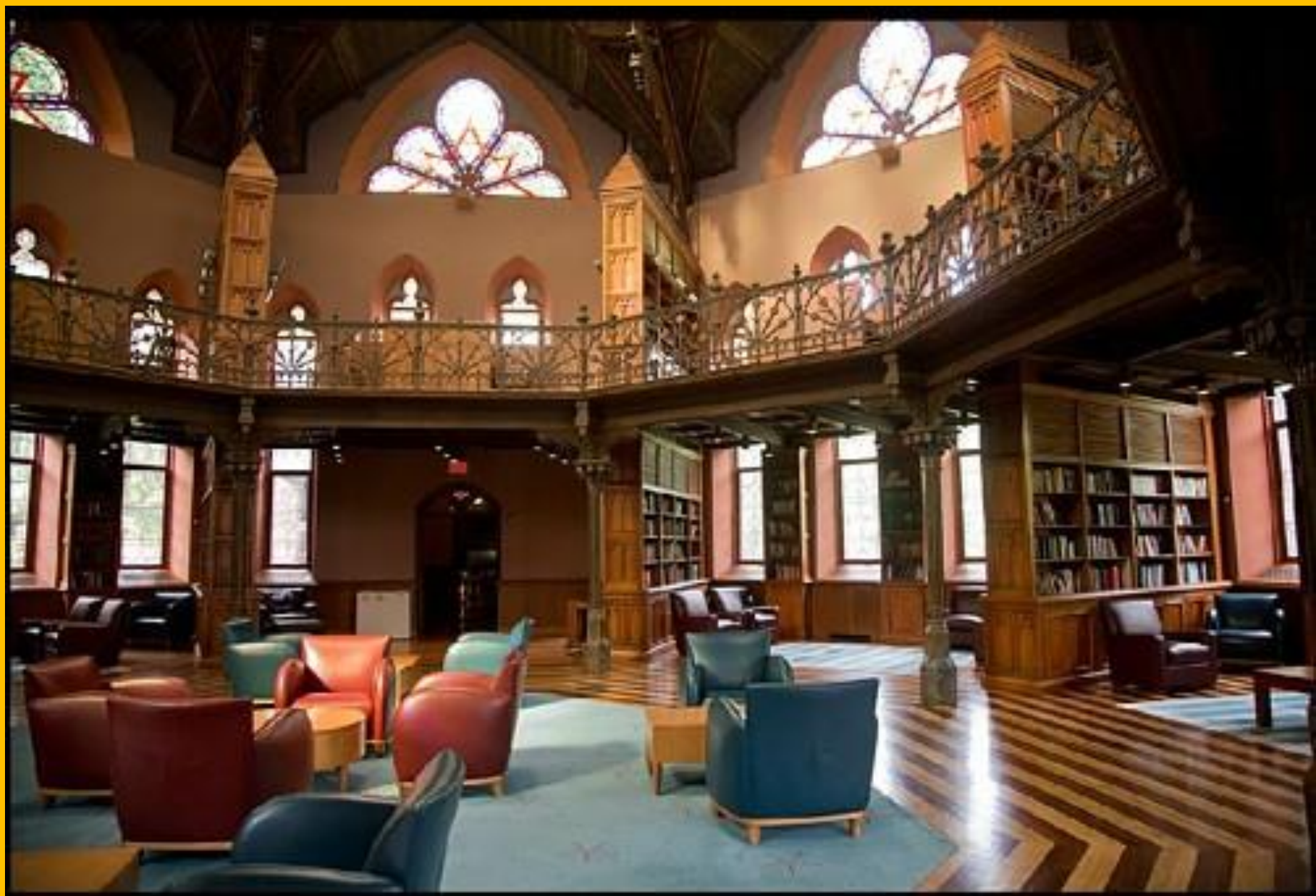
Brazilian Research Council (CNPq) Research Grant 2012-2014 (CNPq # 405032/2012-9)

Acknowledgements

I acknowledge the following individuals and institutions for their generous support during my sabbatical period:

- Prof. Esteban Rossi-Hansberg, Princeton University
- Prof. Gene Grossman, Princeton University
- Prof. Michael Lahr, Rutgers University
- Department of Economics, University of Sao Paulo, Brazil
- Institute of Economic Research Foundation, FINE
- International Economics Section (IES), Department of Economics, Princeton University
- Edward J. Bloustein School of Planning & Public Policy, Rutgers, The State University of New Jersey
- Brazilian Research Council, CNPq
- São Paulo Research Foundation, FAPESP









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