



Science and Technology in São Paulo, Brazil: ESPCA Smart Cities

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The São Paulo Research Foundation, FAPESP

State of São Paulo, Brasil



- 41 Million people
- 34% of Brazil's GDP
- 50% of Brazilian science
- 13% of State budget to HE and R&D
- 1.68% GDP for R&D
- 3 State Universities
- 3 Federal Universities
- 52 State Tech Faculties
- 45% of the PhDs graduated in Brazil (4,937 in 2010)
- 22 Research Institutes (19 state/3 federal)
- 1 Research Foundation
- 62% of R&D public support comes from State sources

Sistema paulista de C&T

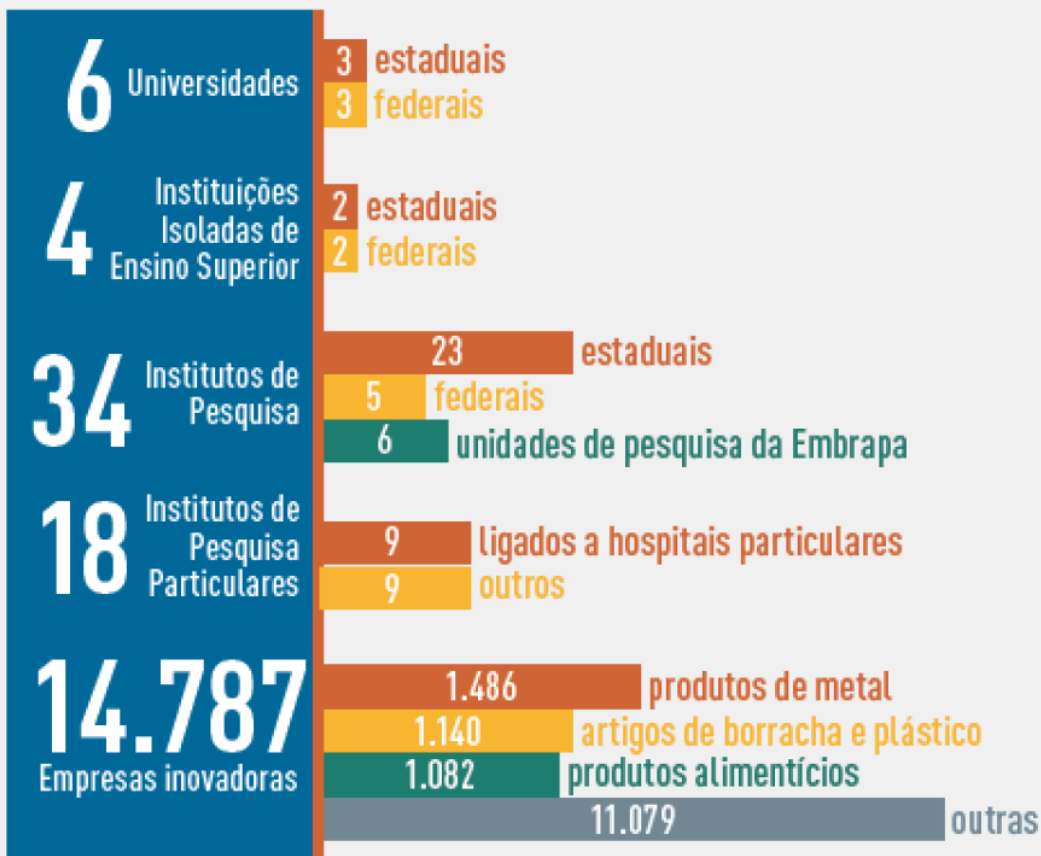
No Estado de São Paulo há mais de

62 entidades

com missão orientada a atividades de pesquisa, além de

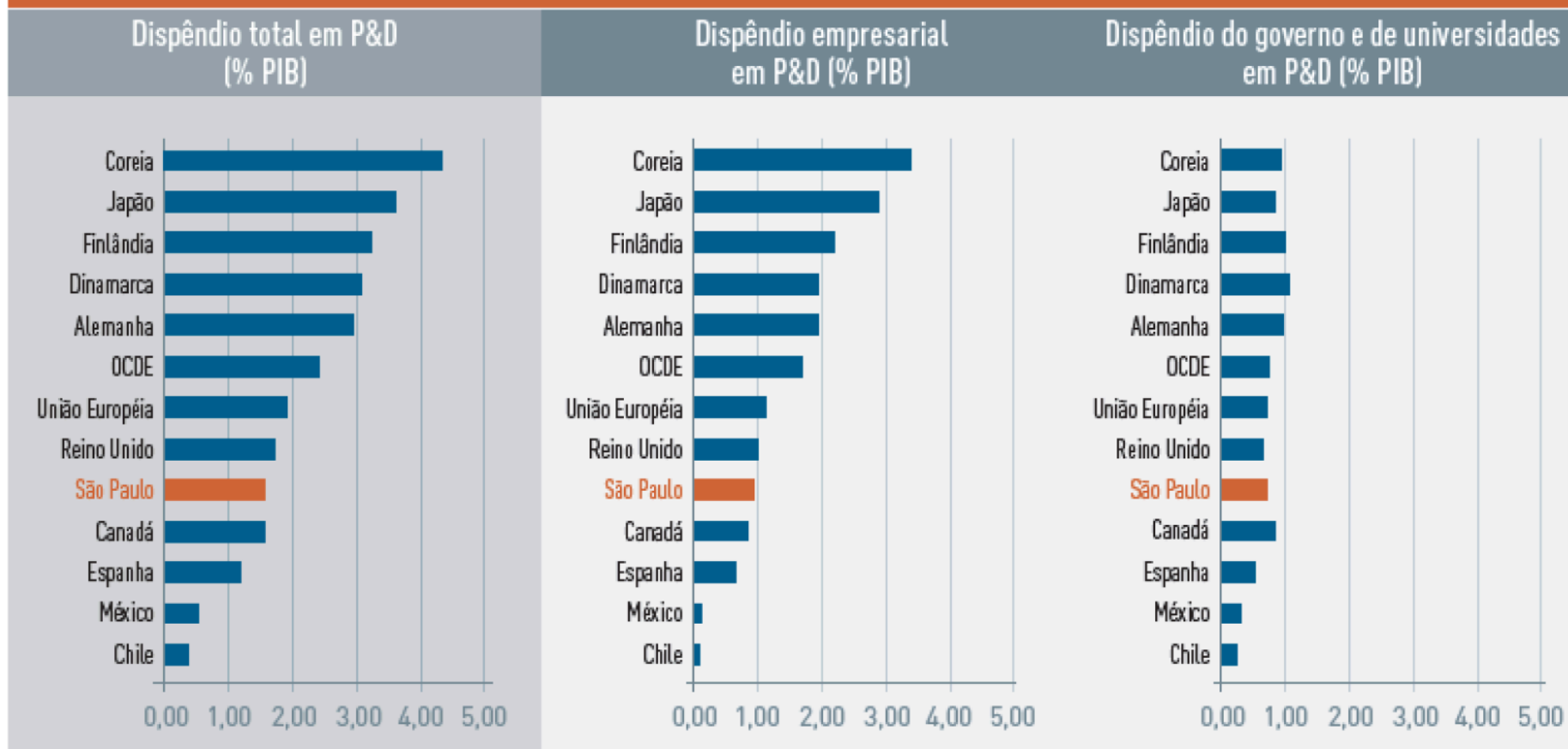
14.787 empresas

que desenvolvem atividades de inovação

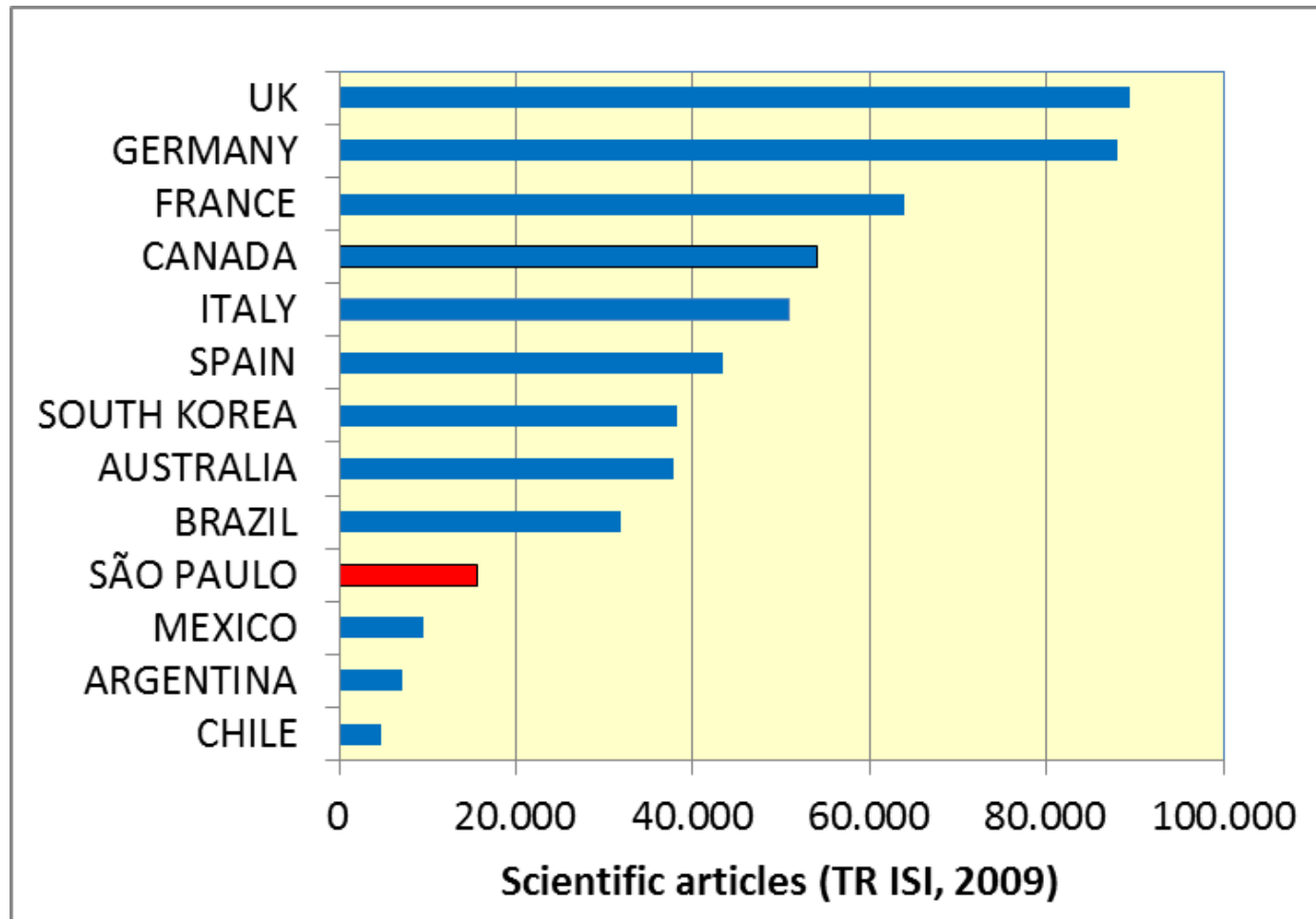


Intensidade do dispêndio em P&D no Estado de São Paulo

COMPARAÇÃO DO DISPÊNDIO EM P&D NO ESTADO DE SÃO PAULO COM OUTROS PAÍSES



São Paulo: 2nd largest science producer in Latin America (2009)



The São Paulo Research Foundation - FAPESP



Fapesp: São Paulo Research Foundation

- Mission: support research in all fields
- All proposals are peer reviewed (21,000 proposals in 2012)
- Funded (1962) by the State of São Paulo with 1% of all state revenues
- Annual budget: US\$ 530 M in 2012

Some of FAPESP's main programs

- **12,000 Fellowships (SI, Training, MSc, Dr, PostDoc,)**
- **Research grants**
 - 17 Centers for Research, Innovation and Diffusion (CEPID) - 11 years funding
 - 312 Young Investigator Awards – 4 years funding
 - 419 Thematic Research Projects – 5 years funding
 - 3,983 Regular Research Grants – 2 years funding
- **Special Programs**
 - Biota: Virtual Institute for Biodiversity
 - BIOEN: Bioenergy Research
 - PFGCC: Global Climate Change Research
 - Neurosciences: Epilepsy (using imaging)
 - IT and Advanced Internet
 - Large, multiuser research instruments
- **Application oriented research**
 - Joint University – Industry (PITE)
 - Small bussiness research (PIPE)

FAPESP recent programs on Computer and Data Science and Engineering





FAPESP AND INTEL CALL FOR PROPOSALS (CFP)

1. INTRODUCTION

FAPESP and INTEL publish this Call for Proposals and invite interested researchers, working within public or private Higher Education or Research Institutions in the State of São Paulo, to submit projects under the cooperation agreement between FAPESP and INTEL, under the terms and conditions hereinafter set forth.

2. SUBJECT

Academic research on side-channel resistant security for system-on-a-chip (SoC) devices.

3. OVERVIEW

FAPESP and Intel's corporate University Research Office (URO) invite proposals from researchers in the State of São Paulo in Brazil on side-channel resistant security for lightweight Internet of Things (IoT) devices. IoT devices are expected to proliferate significantly in the coming years and pose unique challenges due to limited hardware resources, energy constraints, cost limitations, low bandwidth, and physical exposure to attackers. Unlimited access to IoT devices, in particular, creates opportunities for attackers to exploit side-channel information in order to obtain cryptographic keys, access-controlled data, or other types of protected information. Intel requests proposals for non-incremental research leading to compelling techniques and technologies that will make future lightweight IoT devices significantly more secure against side channel attacks than the current state-of-the-art.

4. BACKGROUND

System-on-a-Chip (SoC) based devices are expected to proliferate significantly in the coming years. One well-known source projects the total number of Internet connected devices globally to reach 25 billion by 2015 and 50 billion by 2020.¹ Dramatic increases in SoC-based device technologies will continue to be seen in such fields as

- Consumer electronics (digital cameras, media players, GPS devices, gaming)
- Mobile communications (smart phones, feature phones, cellular base stations)
- Health and medicine (diagnostic equipment, patient monitoring devices, medical imaging)
- Transportation (vehicle control systems, traffic monitoring and regulation)
- Energy (smart meters, climate sensors, energy management systems)

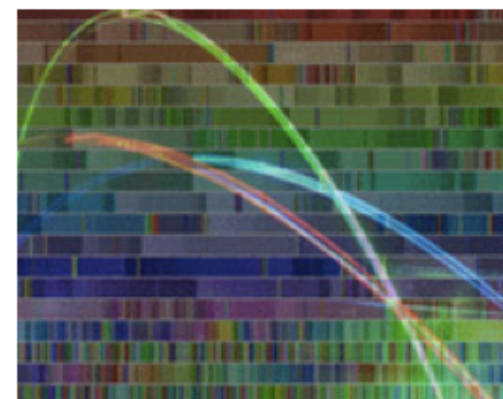
FAPESP announces call for eScience program

FAPESP announce a call for research proposals for the new Research Program on eScience.

The call for research proposals is open to interested researchers associated to non-profit teaching and research institutions in the State of São Paulo. The main goal is to identify, select and broaden world-class, basic and applied research associated to the relevant topics described in the call.

Relevant topics for this call for research proposals are as follows. However, the call for proposals is not restricted to these topics and additional issues that fit in any eScience area are welcome.

- eScience algorithms and models
 - Mathematical models
 - Data-oriented approaches
 - Digital repositories and data management
 - Extreme scale approaches
- Cyberinfrastructure to support eScience
 - Novel hardware
 - Novel uses of cyberinfrastructure
 - Software, services, protocols, and research tools
- eScience target domains, including:
 - Agricultural Sciences



Proposals can be submitted electronically until April 28th, 2014



Especiais

R\$ 98 milhões para pesquisas sobre a internet

19/12/2013

Rodrigo Garcia, Raupp, Lafer, Paulo Bernardo e Meirelles, durante a cerimônia de assinatura do convênio para apoiar projetos sobre aplicações-chave, engenharia e tecnologia e fundamentos científicos (foto: Eduardo Cesar)

Agência FAPESP – O Ministério das Comunicações, o Ministério da Ciência, Tecnologia e Inovação e a FAPESP firmaram um convênio de cooperação no valor de R\$ 98 milhões para apoiar projetos de pesquisa científica e tecnológica que contribuam para o desenvolvimento da internet no Brasil.

A assinatura do convênio, ocorrida na quarta-feira (18/12) na sede da FAPESP, contou com a presença dos ministros Marco Antônio Raupp (Ciência, Tecnologia e Inovação) e Paulo Bernardo (Comunicações); de Rodrigo Garcia, secretário de Desenvolvimento,

Imprimir Enviar por e-mail

Compartilhar: [f](#) [+](#) [t](#)

URL: agencia.fapesp.br/18394

Ciência, Tecnologia e Inovação do Estado de São Paulo; João Carlos Meirelles, assessor especial de Assuntos Estratégicos do governo do Estado de São Paulo; Celso Lafer, presidente da FAPESP; Carlos Henrique de Brito Cruz, diretor científico da FAPESP; Virgílio Augusto Fernandes Almeida, secretário de

Buscar

SIGA A AGÊNCIA FAPESP

Boletim Facebook Twitter RSS



Notícias

Ciência de Alimentos na Unicamp oferece disciplina de pós

Aulas serão ministradas pelos professores Frédéric Carlin, do Inra, e Anderson Sant'Ana, da Unicamp

Notícias

Laboratório da



Notícias

Pós-doutorado em Espectroscopia Vibracional com Bolsa da FAPESP

Bolsista atuará em projeto temático no Instituto de Química da USP

Notícias

Instituto de Pesquisa em

Brazilian Research Institute for Neuroscience and Neurotechnology

About the Center
The Center focuses on investigating the basic mechanisms that lead to epilepsy and stroke, combining genetics, neurobiology, pharmacology, neuroimaging, computer sciences, robotics, physics and engineering.

Center for Cell-Based Therapy

Research on stem cell biology
RIOC focuses on advanced and applied research on stem cell biology. Processes will be developed for the large-scale production under good manufacturing practice conditions.

Center for Research on Inflammatory Diseases

Test can help plan therapy against rheumatoid arthritis
An RBC developed by RIOC scientists, with support from FAPESP, shows whether patients will respond to the drug of first choice even before treatment begins.

Obesity and Comorbidities Research Center

Study shows how exercise protects pancreas in diabetics
Exercise protected by insulin in response to physical activity protects insulin-producing cells in experiments that simulate type 1 diabetes autoimmune attack.

FAPESP

CEPID
Centros de Pesquisa, Inovação e Difusão

Human Genome and Stem-Cell Research Center

Unlocking the secrets of genetics
The Human Genome and Stem-Cell Research Center has identified more than a dozen genes responsible for diseases and have been developed tests for 4% of them.

Center for Research on Redox Processes in Biomedicine

New photodynamic therapy mechanism
A molecule synthesized from natural products gave powerful results in experiments to destroy target cells. Tests were conducted under the aegis of the Center for Research on Redox Processes in Biomedicine.

Center for Research and Innovation in Biodiversity and Drug Discovery

About the Center
The Center for Research and Innovation in Biodiversity and Drug Discovery works with bioprospecting the Brazilian flora with a view towards identifying links to a broad spectrum of biological activities.

Center for Research on Toxins, Immune-Response and Cell Signaling

About the Center
The new Center for Research on Toxins, Immune Response and Cell Signaling starts with an ambitious research plan focused on integration of multi-project aimed at scientific research and motivated towards technological innovation.

Food Research Center

Bacteria combating bacteria for food preservation
Brazilian and Argentinian researchers are seeking ways to enhance the nutritional value and safety of food products using microorganisms derived from the products themselves.

Center for Research, Teaching, and Innovation in Glass

New bioglass reduces risk of titanium implant failure
Material developed at Brazilian university accelerates formation of bone tissue and prevents proliferation of bacteria on surface of metal and orthopedic prostheses.

Center for Research and Development of Functional Materials

Brazilian researchers discover material that may have important applications
The network of electric insulator fibers have better mechanical, photo-luminescent and photo-conductive properties than material synthesized through other means.

Optics and Photonics Research Center

Colorant extracted from turmeric can be useful for combating dengue
When experimentally mixed with water containing larvae of the mosquito that transmits dengue virus, the compound killed 100% of the insects after eight hours of exposure to sunlight.

Center for Metropolitan Studies

FAPESP Week California discusses democracy and social inequality in Brazil
Researchers from São Paulo and the University of California, Berkeley examined possible research collaboration in the social sciences and strategies for citizen participation.

Center for the Study of Violence

Lasting Impact
The Center for the Study of Violence examines the effects of 21 years of dictatorship on contemporary Brazilian society.

Center for Computational Engineering and Sciences

Computational modeling techniques
The Center for Computational Engineering and Sciences brings together highly qualified scientists and finds its unifying scientific focus in the field of computational modeling and high-performance computing.

Center for Research in Mathematical Sciences Applied to Industry

About the Center
The main focus of the Center for Research in Mathematical Sciences Applied to Industry is to promote the use of mathematical knowledge, applied particularly to mathematics, statistics and computer science, as an industry resource.

Research, Innovation and Dissemination Center for Neuromathematics

Free software helps to manage neuroscience experimental data
The program was developed by a team at the Research, Innovation and Dissemination Center for Neuromathematics. The first module is available for download.

Research

Database

GIS

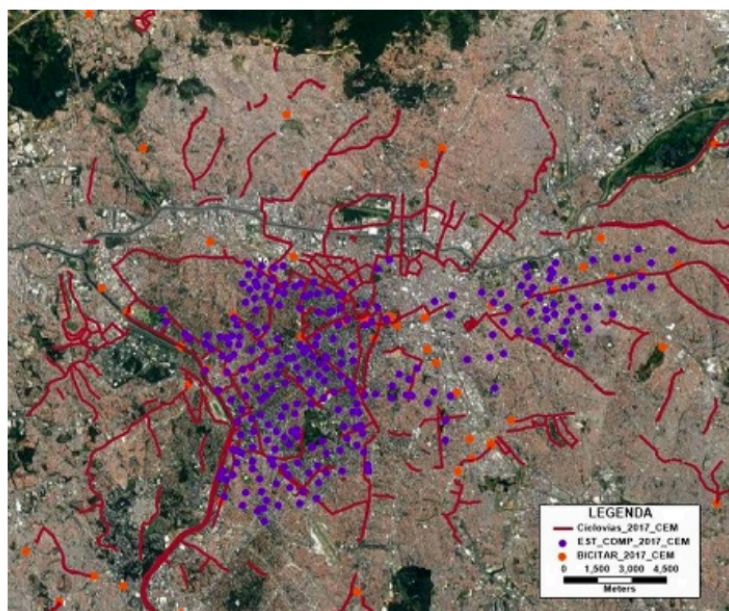
Map Collection

Publications

Interactive

Search

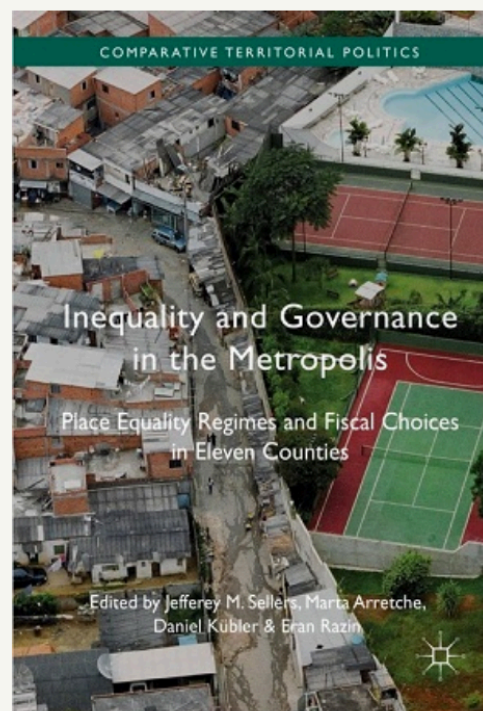
Dataset of cycling routes of the municipality of São Paulo



Center for Metropolitan Studies provides a dataset related to mobility by bicycles

From now on, the city of São Paulo now has a picture of bicycle lanes, bike lifts and shared bicycle stations. CEM makes available on its website three georeferenced databases related to the theme of bicycle mobility in the city of São Paulo. The database may be accessed through the CEM Database. Access is immediate after user registration.

International book release on Comparative Territorial Politics



New book co-authored and co-edited by CEM director, professor Marta Arretche

"Inequality and Governance in the Metropolis:"

Researchers

Projects coordinators:

Adrián Gurza Lavalle
 Charles Kirschbaum
 Eduardo Cesar Marques
 Fernando Limongi
 Gabriel Feltran
 José Marcos Pinto da Cunha
 Marcia Regina de Lima Silva
 Marta Arretche
 Nadya Araújo Guimarães
 Renata Miranda Bichir
 Vera Schattan Coelho

Associate Researchers

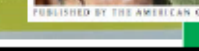
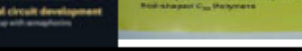
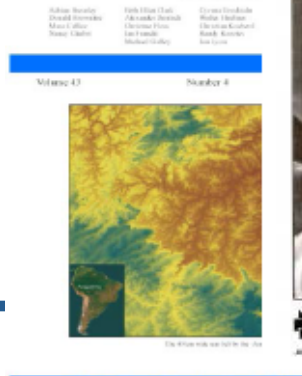
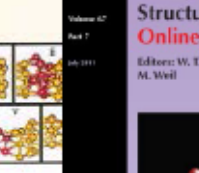
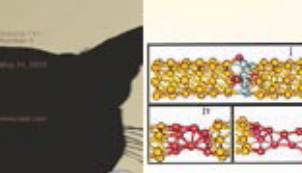
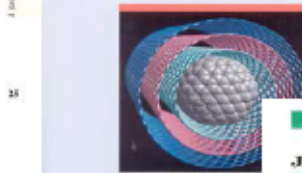
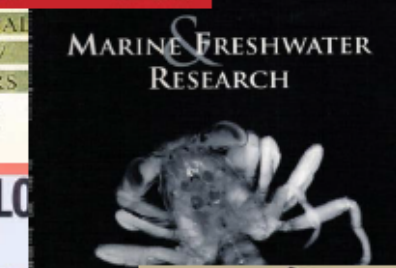
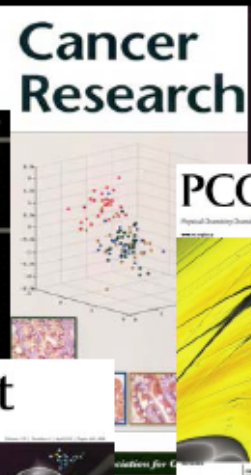
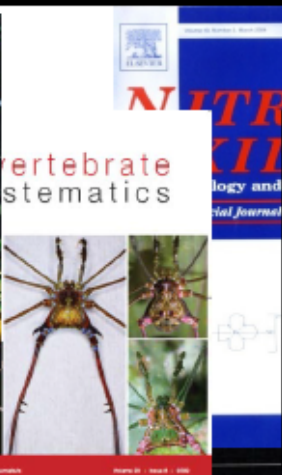
Visiting Researchers

Researchers

Researchers with a post-doctoral scholarship

Junior Researchers

International Research Advising Committee



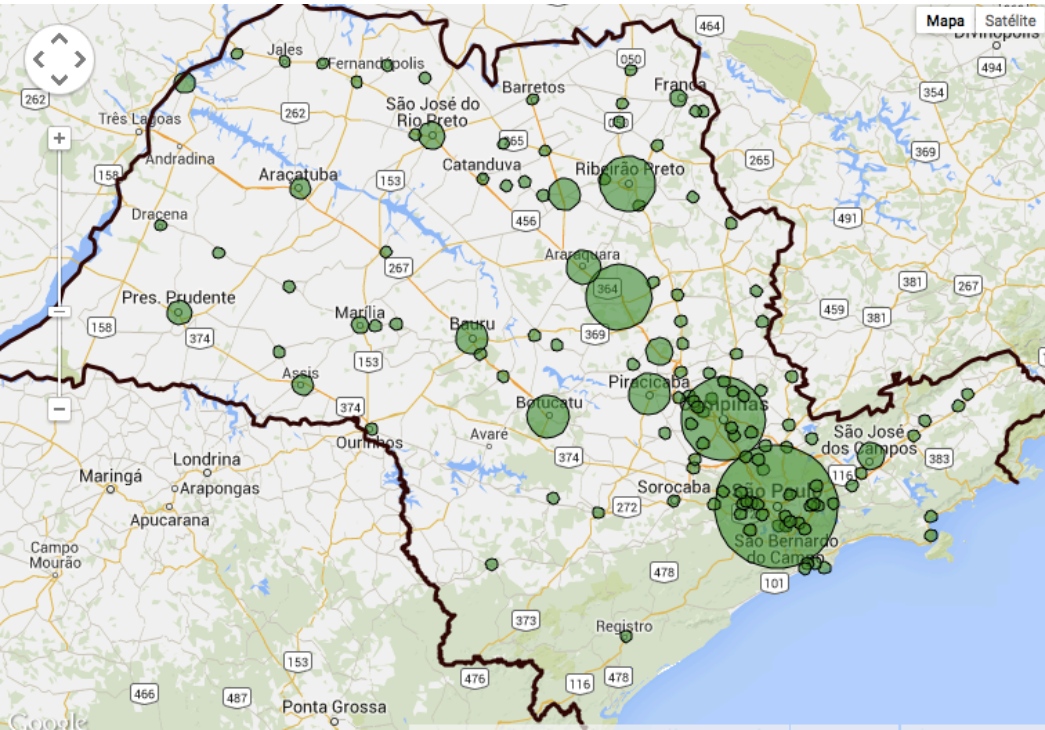
MANY MORE OPPORTUNITIES

RESEARCH & INNOVATION

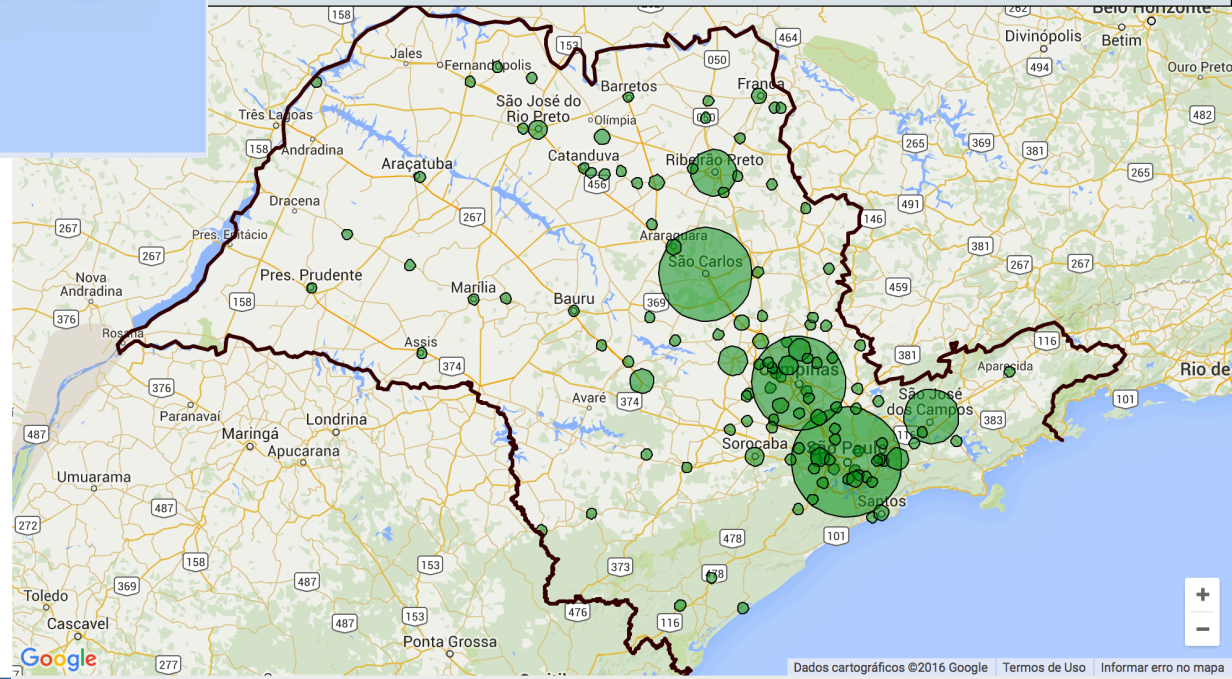
Research for Technological Innovation

- PIPE – The Research for Technological Innovation in Small Businesses Program
 - Research projects developed by researchers in small companies
- PITE – The Partnership for Technological Innovation Program
 - Research projects developed in partnership with R&D institutions in the State of São Paulo and businesses located in Brazil and abroad

Scholarships

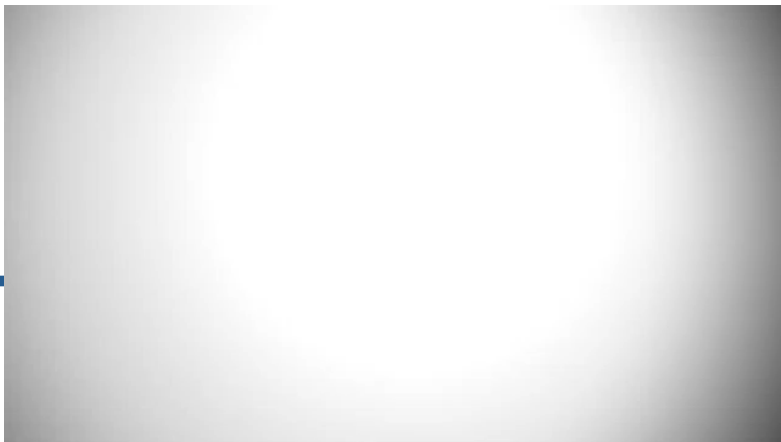


Fomento por município do Estado de São Paulo Pesquisa Inovativa em Pequenas Empresas (PIPE)



FAPESP: basic and applied research that allows economic development and broader impact.

PIPE

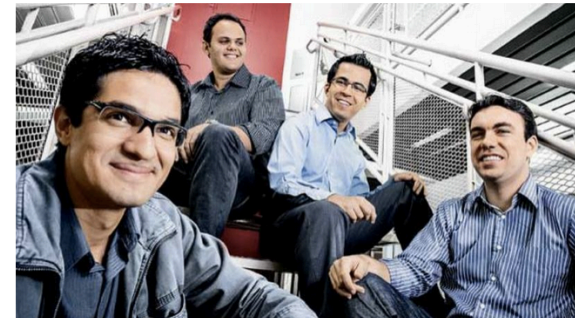


Fundo Pitanga investe na I.Systems, de Campinas

f Recomende t g+ in

3.791 views 0 Salvar notícia

Germano Lüders/EXAME.com



Os sócios da I.Systems: tecnologia inovadora para competir com GE e Siemens em países da Ásia e nos Estados Unidos

Imagine

- Um método eficaz contra dor
- Um tratamento para dor sem efeitos colaterais
- Um tratamento sem interação medicamentosa
- Algo fácil como tomar um comprimido
- Algo fácil de encontrar, à venda em qualquer farmácia

Isso é **TANYX**

Considere experimenta da próxima vez que sentir dor

Tanyx acelera recuperação do Neymar para jogo contra a Colômbia





Relatório de Mobilidade

É um produto beta que traz informações condensadas do transporte público por ônibus em



[Página inicial](#) » [Notícias](#)

Pesquisas sobre cidades inteligentes-cidades sustentáveis são selecionadas

A FAPESP e a Finep anunciam o resultado de uma chamada de propostas para apoiar o desenvolvimento, por empresas paulistas, de produtos, processos e serviços inovadores para aplicações em cidades inteligentes e sustentáveis.

A cidade inteligente é uma construção evolutiva, um processo que envolve a constante busca de resolver problemas por meio de soluções disruptivas, fazendo-se uso de materiais integrados com sensores, dispositivos eletrônicos e redes de comunicação, os quais são ligados com sistemas computadorizados, para análise de dados a partir de algoritmos inteligentes que tomam decisões.

Puderam participar da chamada microempresas, empresas de pequeno

porte, pequenas empresas e médias empresas brasileiras sediadas no Estado de São Paulo e constituídas no



Chamada FAPESP-Finep financiará desenvolvimento por empresas de produtos, processos e serviços inovadores (*foto:*

Wikimedia)

Partnership for Technological Innovation *(PITE)*

- Cooperative R&D
 - University/Research Institutes - Industry
 - Fapesp funds (non refundable) - 20 to 70%
 - Industry funds the complement
- PITE Proposals
 - Industry-University demand (since 1995)
 - Joint calls Fapesp-Industry (since 2006)

Fapesp – Industry joint calls for proposals

- Fapesp and a company issue a joint call for proposals
 - Themes proposed by industry
 - Exploratory R&D
 - Joint Steering Committee
 - Merit reviewed by Fapesp
- Agilent, BP Biofuels, Biolab, Boeing , Braskem, Ci&T, Cristalia, Dedini, Embraer, ETH Bioenergy, GSK, Microsoft Research, Natura, Research, Ouro Fino, Oxiteno, Padtec, Petrobrás, PSA Peugeot Citroën, SABESP, Telefonica, VALE, Whirlpool, ...

Engineering Research Centers

- New instrument to support research in partnership with industry
 - Peugeot Citroën: Engineering Research Center for Biofuel Engines
 - BG: Research Centre for Gas Innovation
 - Natura: Center for Applied Research on Well-being and Human Behavior
 - GSK: Green Chemistry
 - GSK: Target Discovery
 - Shell: New Energies Research Center
 - Statoil: Reservoir and Production Management
- Co-funding
- Exploratory research on themes proposed by industry
- Long term (up to ten years)

MANY MORE OPPORTUNITIES

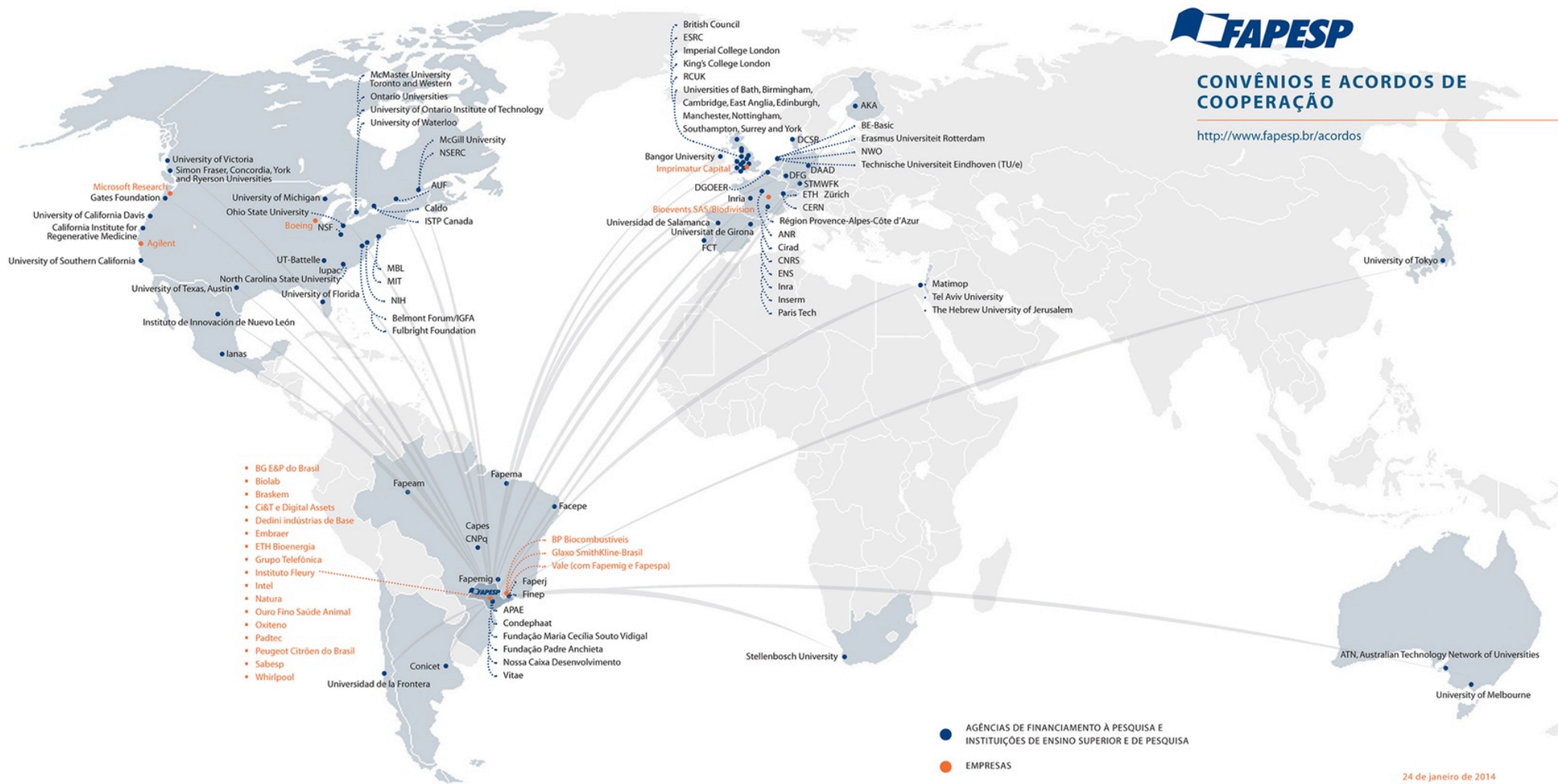
INTERNATIONAL COLLABORATION

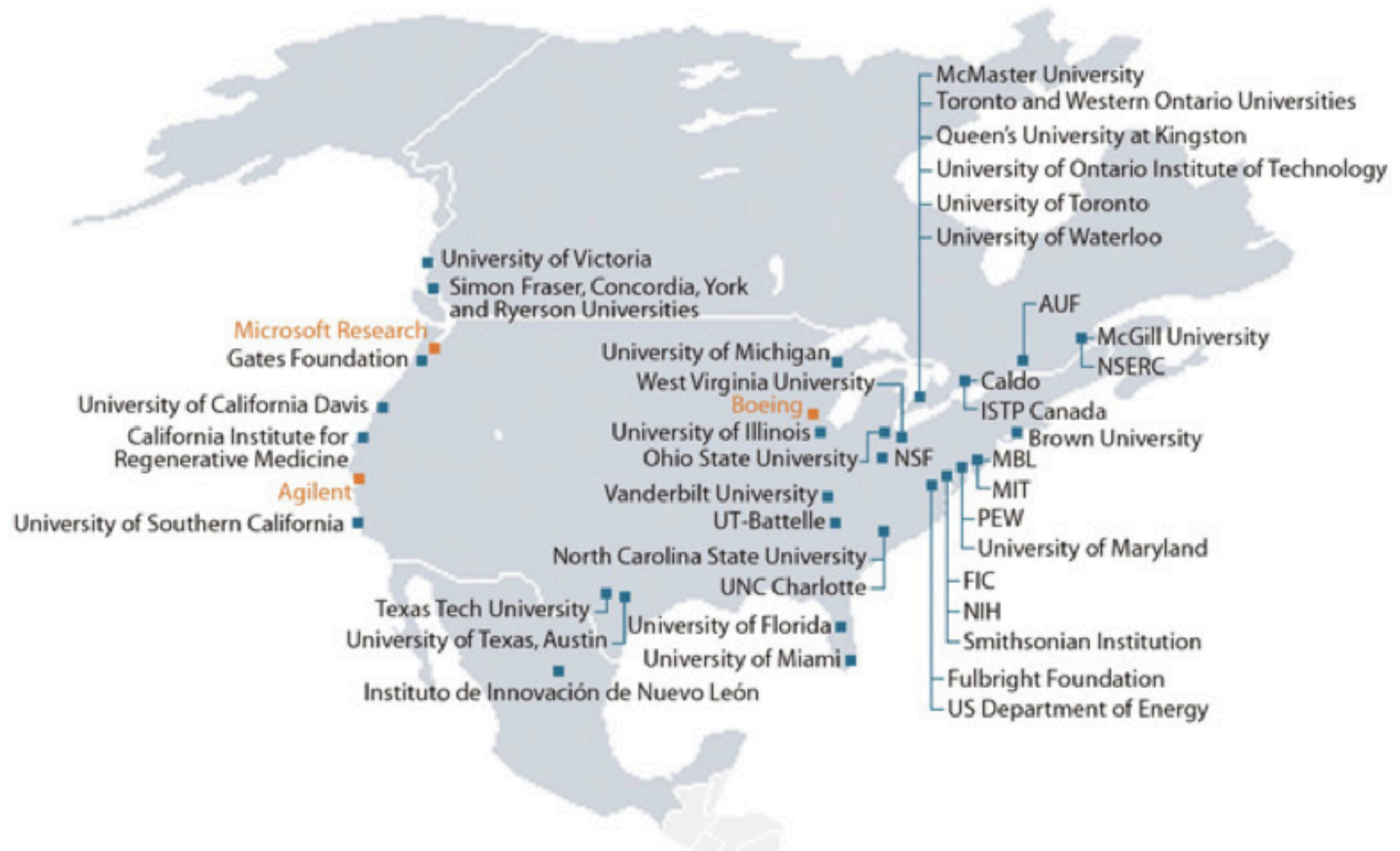
Fapesp: International Collaboration

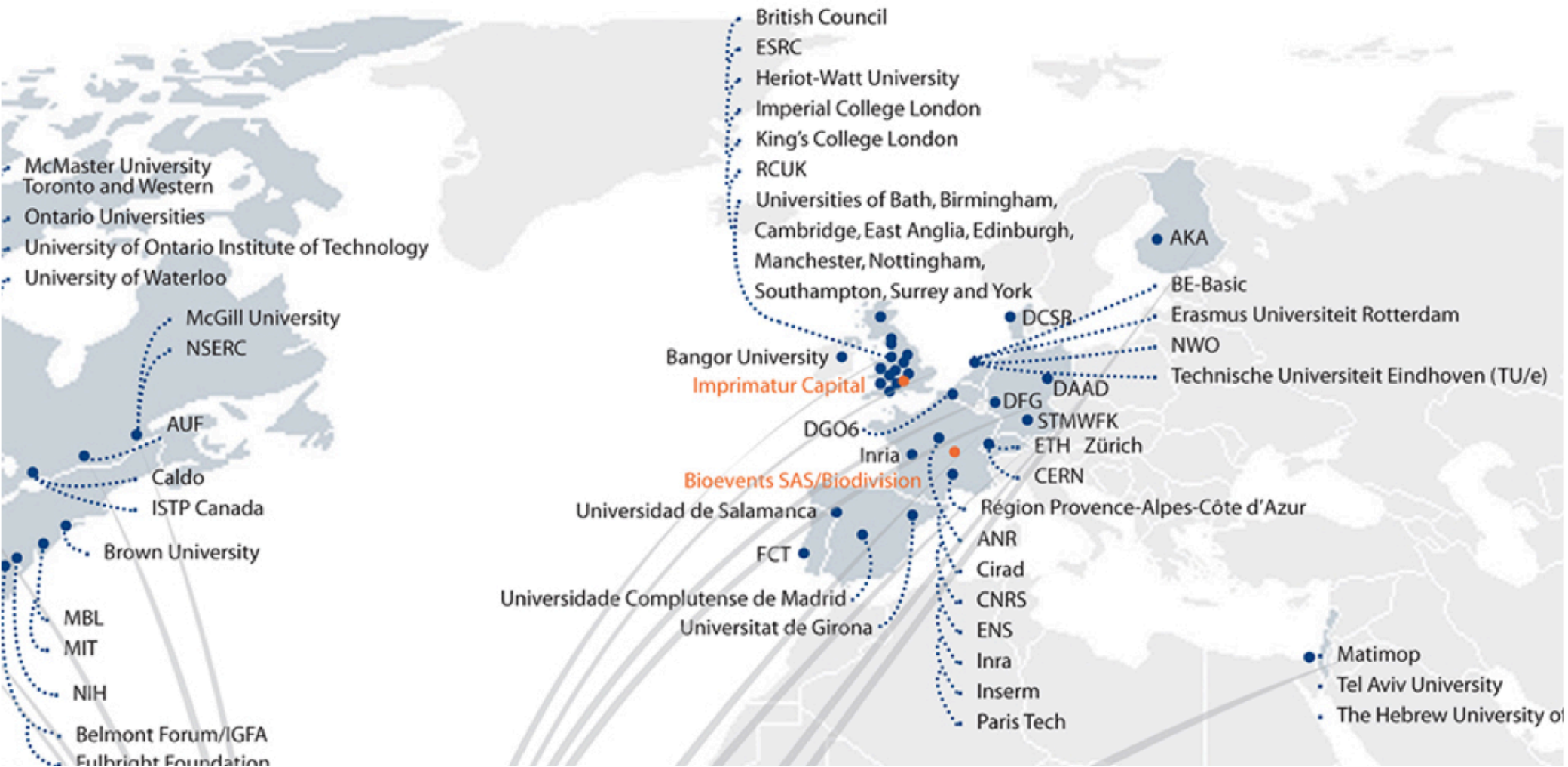
- International agreements (funding agencies, institutions)
 - Mobility
 - Joint projects
- Scholarships allow SP students to develop their project abroad (BEPE)
- Attracting researchers to SP:
 - Post-docs
 - Young Investigators
 - SP Excellence Chairs



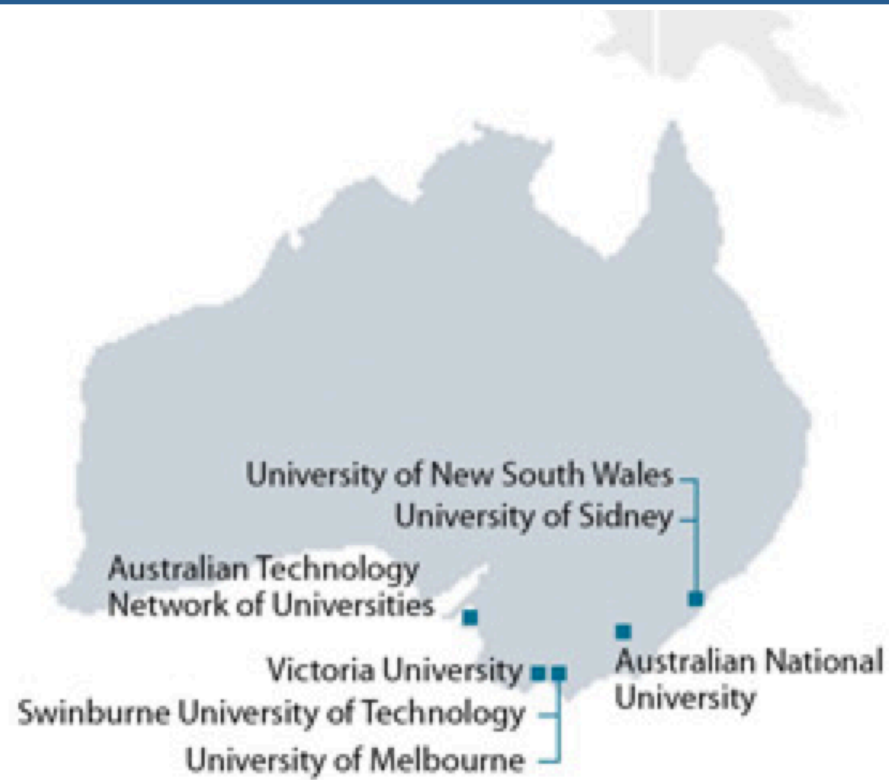
FAPESP International agreements (> 110)



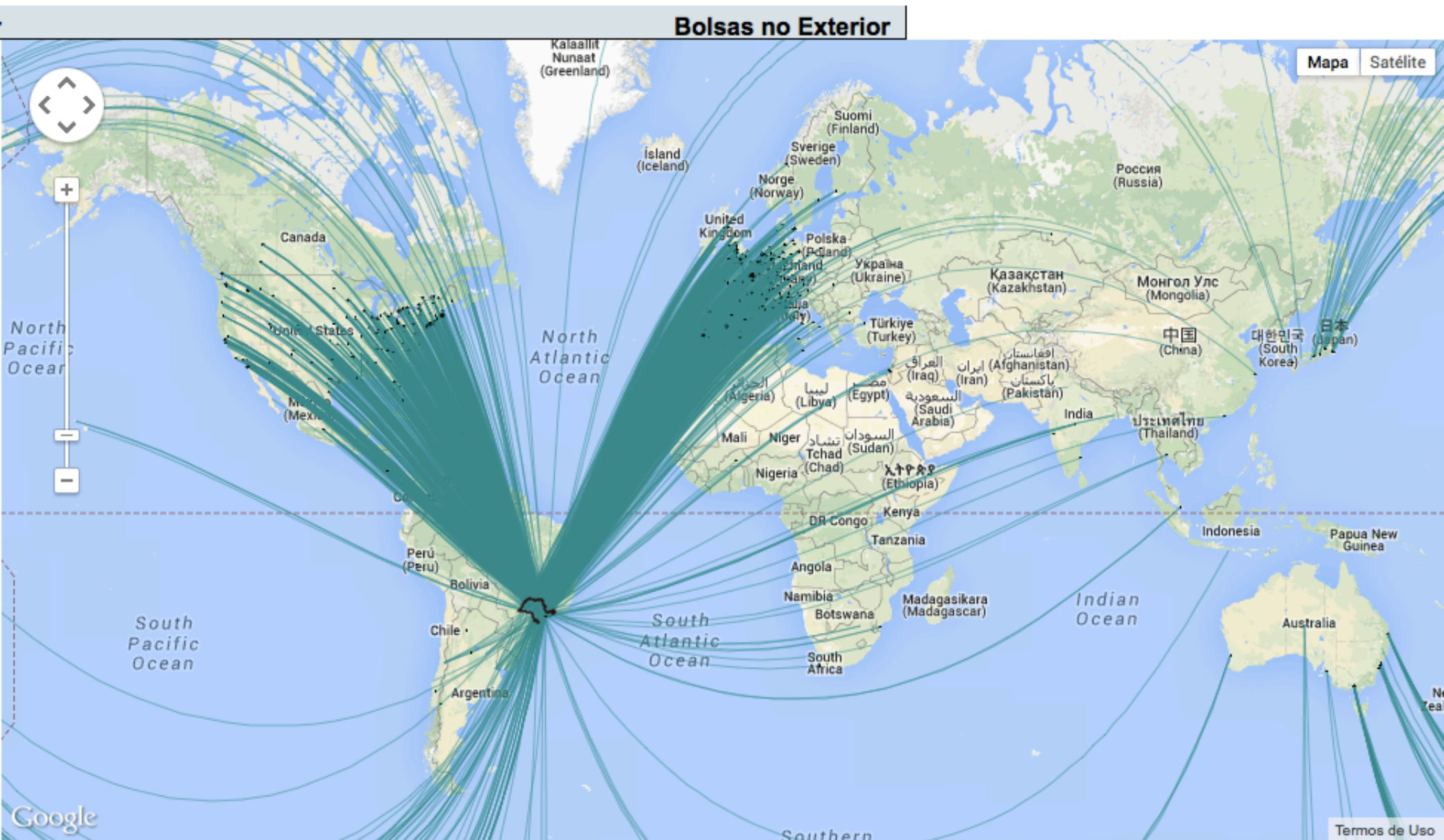








•Fapesp: BEPE funded scholarships



Convênios e acordos de cooperação English

Shell



Brasil terá centro de pesquisa em novas energias

FAPESP e BG E&P Brasil (Grupo Shell) lançam chamada de propostas para instalar o Centro de Pesquisa em Novas Energias

Acordos mantidos pela FAPESP com:

- Agências de financiamento à pesquisa
- Instituições de ensino superior e de pesquisa
- Organizações multinacionais
- Empresas
- Associações

Colaboração internacional

Bolsas e Auxílios concedidos pela FAPESP em pesquisas com colaboração internacional

SPRINT – São Paulo Researchers in International Collaboration

As colaborações internacionais em pesquisa apoiadas pela FAPESP contam a partir de agora com o SPRINT - São Paulo Researchers in International Collaboration, uma estratégia de organização que consiste no anúncio simultâneo de oportunidades de colaboração internacional com diversos parceiros da FAPESP.

Além de promover o engajamento de pesquisadores vinculados a instituições de ensino superior e pesquisa no Estado de São Paulo com pesquisadores parceiros no exterior, o SPRINT tem por objetivo contribuir para o planejamento mais conveniente para as submissões de propostas de mobilidade (*seed funding*).

Como resultado espera-se o avanço qualitativo nos projetos de pesquisa em andamento e também que os pesquisadores parceiros trabalhem cooperativamente visando a elaboração de projetos de pesquisa conjuntos de



Programas

Chamada de propostas
SPRINT - Edição 3/2015

Chamada de propostas
SPRINT - Edição 2/2015

Chamada de propostas
SPRINT – Edição 1/2015

Chamada de propostas
SPRINT – Edição 3/2014

Chamada de propostas
SPRINT – Edição 2/2014

Chamada de propostas
SPRINT - Edição 1/2014

International Collaboration

This page displays international collaborative research information funded by FAPESP.

In order to encourage the researchers in São Paulo to develop collaborations in research with colleagues from other countries, FAPESP provides several financial instruments to support research.

There are several [cooperation partnerships and agreements](#) with funding agencies, research institutions and foreign companies, under which Calls for Proposals are open in order to select and co-finance collaborative research.





Opportunities are announced in specific calls or by means of [SPRINT - São Paulo Researchers in International Collaboration](#), an initiative launched in 2014. With this instrument, funding is provided for the initial phase of international research collaboration (proposals to enhance researchers' mobility - seed funding). At SPRINT calls, there are clear expectations that the next phase will be a presentation of research proposals by both Principal Researchers (one from the State of São Paulo and the other from a foreign country). These proposals shall be in accordance with the regular funding lines of FAPESP and with the funding agencies available to the foreign partners, aiming to continue the research started under SPRINT and the consequent consolidation of the partnership.

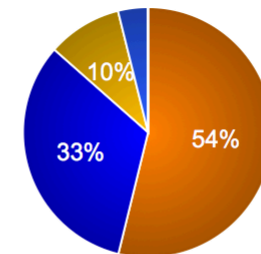
In addition, FAPESP provides the following institutional instruments aimed to enhance international research collaboration:

- [Visiting Researcher Grant](#)
- [Scholarships for Research Abroad](#)
- [São Paulo School of Advanced Science \(ESPCA\)](#)

FAPESP support in numbers

(Total / Available in English)

381 / 361	Ongoing research grants	
5,628 / 3,083	Completed research grants	
1 / 1	Ongoing scholarship in Brazil	
5 / 4	Completed scholarships in Brazil	
907 / 907	Ongoing scholarships abroad	
8,042 / 5,078	Completed scholarships abroad	
14,964 / 9,434	All Research Grants and Scholarships	



Fapesp: Post-doctoral scholarships

- Up to 5 years
- R\$ 6000,00 (approx. US\$ 2000)
- Grant (travel, conferences, etc): US\$ 6000 / year
- BEPE complement: up to 1 year abroad

Fapesp: Young Investigator Award

- Up to 4 years
- Scholarship (if no permanent position): R\$ 6000,00 (approx. US\$ 2000)
- Grant (travel, conferences, etc): US\$ 6000 / year
- Equipament, consumables, scholarships for students

Fapesp: São Paulo Excellence Chairs

- Similar conditions to Thematic Projects (up to 5 years projects)
- Scientists from abroad should spend at least 3 months/year in SP
- Laboratory should be created in SP
- Equipament, consumables, scholarships for students (including Post-docs)

Further FAPESP Information

- <http://agencia.fapesp.br/en/>



- <http://www.bv.fapesp.br> (all funded projects online)