

- 1. first and last name
- 2. date of diploma giving access to doctoral studies in the country in which the diploma was obtained,
- 3. current status and affiliation,
- 4. motivation letter,
- 5. a scientific CV,
- 6. a short description of previous and current research work,
- 7. a short description of career plans,
- 8. name and email address of doctoral / PhD supervisor,
- 9. name and address of two researchers who are willing to write a letter of recommendation (may include the doctoral / PhD supervisor),
- 10. title and abstract of the intended presentation.

1. Last name: **LI**

First name: **Jun**

2. Date of diploma access to doctoral studies:

July 2005, Master obtained in France

(I completed my Ph.D in 2009)

3. Current status: postdoc researcher

Affiliation: IDDRI-Sciences Po, France

4. Motivation letter

Dear Professors,

I am a postdoc researcher at the Institute for Sustainable Development and International Relations (IDDRI), a Paris-based research institute on sustainability and global issues. I would like to apply for the 23rd ERSA Summer School 2010 "Productivity and Financing of Regional Infrastructure", below are the main reasons of my application.

1. Compatible research area

Currently I am postdoc researcher at the department of urban studies at the IDDRI and my research work focuses on urban sustainability analysis, in particular the urban infrastructure efficiency financing. I have been looking at the issues of how to implement policies and measures to facilitate sectoral transition to climate resilient cities in the developing countries, in particular in the buildings and transport sector in Chinese and Indian metropolis. I am trying to quantify the potential of energy savings and carbon emission reductions in the citywide mitigation policies and optimized urban planning to city wide emissions. Then I try to formulate relevant economic instruments that can help to remove the barriers to financing large-scale deployment of proven technologies to guarantee both energy and climate securities and sustainability.

Thus my research interests are consistent with the topic and courses of the 2010 summer school. The in-depth understanding of the way of financing the regional infrastructure to enhance regional economic competitiveness and improve social welfare and reduce climate change risks is of particular importance. My participation in this summer school will build up and strengthen my knowledge in these areas.

2. Mutual benefits from attending the summer school

Attending this summer school will give me a unique opportunity to learn from the experts in the different area of regional productivity and infrastructure financing, in particular to the understanding of development challenges. I will also be able to discuss with the colleagues to identify region-specific strategies to facilitate the rapid dissemination of knowledge on sustainable infrastructure development risk management as well as enhanced performance economic growth of our society. I will also be able to share my experiences with my colleagues in the experiences in developing countries. The meeting with different colleagues from diversified background, the interaction between policy-makers and academia will be a unique platform for me to bring about fresh inspiration of new ideas.

In short, my participation in this summer school will contribute to enlarging the discussion and interaction between researchers and students from different background. I believe I can learn plenty of new knowledge from this school from others, I will also contribute my

zealous effort to constructing a dynamic interactive intellectual exchange network among people who are active in the areas of regional sciences and infrastructure financing and management.

Please find below my Curriculum Vitae.

Thank you very much for your kind consideration of my application.

Sincerely,

Jun LI

5. Curriculum Vitae

Jun Li

Institut du développement durable et des relations internationales

75007 Paris, France

Phone : +33 145 497 678

E-mail : jun.li@iddri.org

Education

- | | |
|-----------|---|
| 2005-2009 | Ph.D in Energy Economics

Ecole des Mines de Paris |
| 2004-2005 | DEA (M.Phil). Urban Transformation and Territorial Governance
<i>École Nationale des Ponts et Chaussées</i> |
| 2002-2004 | M.A. Urban planning and management
<i>Institut d'Urbanisme de Paris</i> |
| 1997-2001 | B.A. Urban planning and economics
<i>Huazhong University of Sciences & Technology, Wuhan</i> |

Research Experiences

- | | |
|------------------------------|--|
| July -October 2007 | Participation in research programme “ EU-China Interdependencies on Energy and Climate Security”, in collaboration with Chatham House (UK) , E3G (UK), PIK (Germany), IDDRI (France), CASS and ERI (China) |
| November 2008-present | Participation in « Energy and sustainable cities » in collaboration with AFD, CCICED, NIES et SEI. Case studies of Chinese cities regarding urban morphology, la |

town planning and energy efficiency.

- Energy and economic modelling
- Economic analysis of building sector, analysis of building supply chain and construction costs to improve building energy efficiency
- Analysis of integration of land use regulations and transport policies

2006-present

-Agence de l'Environnement de la Maîtrise de l'Energie (ADEME)

-Institute for Sustainable Development and International Relations (IDDRI)

Doctoral researcher in energy efficiency and climate change in emerging countries

2008-present

Referee for journals published by Elsevier (*Energy Policy, Energy and Buildings*)

List of Publications

Journal Articles

- "Managing Carbon Emissions in China through Building Energy Efficiency" (with M.Colombier), *Journal of Environmental Management*. 2009. Vol.90 (8), pp.2436-2447.
- "Decision on optimal building energy efficiency standard in China—the case for Tianjin" (with Michel Colombier and P-N.Giraud), *Energy Policy* (impact factor:1.901). Vol 37 (7): 2546 – 2559.
- "Scaling up concentrating solar thermal technology in China. 2009. " *Renewable and Sustainable Energy Reviews* (impact factor:4.075). Vol.13 (8), pp.2051-2060.
- Towards a low carbon future in China's building sector- a review of energy and climate models forecast. *Energy Policy* (impact factor:1.901), 36 (5) 1736 – 1747
- "Grappling with Carbon Emissions in buildings in China" . *J. of Energy Engineering* (In Press)
- "Economic instruments for mitigating carbon emissions: scaling up CDM in China's buildings sector" , *Climatic Change* , under revision

Special journals

- “Quelles perspectives de la consommation d’ énergie et d’ émission de carbone dans les bâtiments en Chine?” 2008. *Revue de l’ Energie*, n°581,pp.25-35.
- An essay on EU-China Interdependencies on Climate and Energy securities (in Chinese). *Journal of International Economics and Politics*. Vol (8), pp.24-32. Chinese Academy of Social Sciences.

Conference proceedings

- “Role of urban infrastructure quality in sustainable development in China” . Paper presented at the 15th *Annual International Sustainable Development Research Conference* (AISDRC), Utrecht, The Netherlands. 5-8 July, 2009.
- “Modeling the long term energy and climate implications in the Chinese buildings sector--case of Tianjin” , paper submitted to the 32nd IAEE International Conference , San Francisco, June 2009.
- “Climate Resilient Urban Infrastructure Development – the role of building efficiency quality in China” , paper accepted to be presented at the 3rd International Urban Research Symposium, co-organized by the World Bank and Agence française du développement, 28-30 June , 2009, Marseille, France
- “Economic instruments for sustainable built environment in China.” Speech at UNEP-SBCI biennial meeting, Madrid , December 2-4, 2008.
- “An economic analysis of optimal building energy efficiency standard in China” , paper presented at the 2nd IAEE Asian Conference, Perth, Australia, November 5-7, 2008
- “Sustainable energy future in China’ s building sector” , paper presented at the 7th International Conference of Enhanced Building Operations (ICEBO) , San Francisco, November 1-2, 2007.
- “The perspective of low carbon buildings in Chinese cities” . Paper presented at the 1st International Conference Engineering for Sustainable Energy in Developing Countries, Rio de Janeiro, Brazil. August, 2007

Chapters in books

- Enabling Transition to LCE in Asian Cities: Drivers, Barriers and Solutions, chapter 8 in “Transition to Low Carbon and Climate Resilient Economies in Asia” , edited by the Institute for Global Environmental Strategies (IGES), Earthscan, June 2010.
- A cross review of public policies for building energy efficiency improvement in France and China (in Chinese). In *China Buildings Energy Efficiency Review*, China Architecture and buildings Publishing house. 2007. Vol.48.

Working paper

- Co-author of “Changing climate: interdependencies on energy and climate security for china and Europe?” report, UK: Chatham House, 2007. 101 p.
- “EU-China Bilateral Collaboration on Energy Efficiency in Buildings” . Chatham House, February, 2008. 45 p.
- “ Prospective énergétique dans les bâtiments neufs en Chine 2005-2030 ” : prepared for the French Energy Efficiency Agency (ADEME),May, 2006. 65 p.
- “ Décision optimale de la sévérisation des normes thermiques du bâtiment dans les villes du nord en Chine—cas d’ étude de la ville de Tianjin ” : Thesis report for ADEME, June, 2007. 72 p.

Language Skills

English fluent (TOEIC 945)

French fluent

German basic knowledge

Chinese native

Computer skills

MS-Office; Photoshop; Latex; Matlab (notions) ; Eview, SPSS, ConsoClim; EnergyPlus; LEAP Model

6. Descriptive of previous and current work

I worked on the economic modelling and policy instruments design for energy efficiency in urban infrastructure (in the buildings sector) in Chinese cities, in my Ph.D thesis at the Paris School of Mines (Ecole des Mines de Paris).

I have been involved in several research programmes related to the urban energy efficiency and sustainable finance issues. From June to November 2007, I participated in the *EU- China interdependency on energy and climate research security* programme in collaboration with the Chatham House in the UK and PIK in Germany. I am co-author of the final report in which the topic of development of low carbon economic zone (LCZ) has been highlighted. I also participated in another research project *on energy efficiency and low carbon cities in China* in collaboration with several international research institutions, we provided policy recommendations for decision makers in China. Also, I have attended several international conferences and seminars to present my research on financing urban infrastructure in developing countries. I have also published several scientific papers in academic journals. Please find details in the list of publication in my CV.

My current research focuses on policy instruments for sustainable urban development and climate change mitigation in cities in developing countries, in particular in China and India. It seeks to establish a dynamic link between the energy performance of urban infrastructure developed today and the financial capacity to invest in new technologies to decarbonise the energy supply in cities tomorrow. Barriers and opportunities to and policy tools for carbon emissions management in the building and transport sector will be investigated. I used techno-economic modelling approach to apprehend the analysis of complex urban system in cities. My works consist of three main building blocks. First, I use economic analysis tool as well as modelling approach for investigating the energy efficiency improvement and carbon emission mitigation potentials in the urban infrastructure in fast-growing emerging cities. I study different technical options for ameliorating energy-supply side efficiency including clean energy and demand side management in light of optimising the the social costs of energy consumption, energy supply and carbon emission containment in cities. The second pivot of my research investigate how to harness the carbon finance to scale up the investment in the low-carbon urban infrastructure development in cities and facilitate their transition to low-carbon development trajectory. The third research area deals with climate technology transfer and policies for deployment of renewable energies in cities. Integrated analysis approach is employed.

7. Description of career plans

Career Goal 1: To be able to write high quality scientific papers in a variety of academic journals and participation in high level research conferences in the area of energy, infrastructure, environment and climate change and regional sustainable economic development

Career Goal 2: Improve my ability to manage several research projects at once; to concentrate on important and high priority issues and coordinate national and international research cooperation in the aforementioned areas.

Career Goal 3: Broaden my knowledge of urban development issues and improve my skills with particular emphasis on integrated study approach: engineering, economics, econometrics, GIS and politics etc.

Career Goal 4: establish cooperation between academics and industrial and public authorities to enhance regional sciences and operation performance

- **8. name and email address of doctoral / PhD supervisor**

Professor Pierre-Noel Giraud , Paris School of Mines

Email: pierre-noel.giraud@ensmp.fr

- **9. name and address of two researchers who are willing to write a letter of recommendation (may include the doctoral / PhD supervisor)**

Professor Laurence Tubiana: laurence.tubiana@sciences-po.fr

Professor Vincent Renard (urban economist) vincent.renard@polytechnique.edu

- 10. title and abstract of the intended presentation.

Title : Financing sustainable urban infrastructure in developing cities

Summary

This presentation investigates the role of carbon finance in facilitating transition towards low-carbon trajectory in urban infrastructure development in developing countries, so as to shed light on the international climate negotiations. We seek to establish a policy framework that allows reorientation of upfront investment in urban infrastructure for changing pathway by harnessing economic lever to facilitate climate-friendly development trajectory in cities. It draws on an in-depth exploration of different climate finance mechanisms and their applicability in the context of urban infrastructure development in developing cities. CDM, programmatic CDM and sector crediting approach including SNLT, SD-PAMs and NAMA are analysed with regard to their policy relevance, implementability and economic and environmental effectiveness as well as related challenges in light of scaling up financing actions in cities. Sound carbon finance policy will have significant implication for developing climate resilient urban infrastructure (transport and buildings inter alia) in fast-growing cities in DCs. We suggest an integrated approach should be adopted to aggregate city-based multiple individual GHG mitigation projects dealing with buildings and transport efficiency. The sectoral approach and NAMAs-based financing schemes be included in post-Kyoto regime for shifting the current trajectories in fast growing developing cities.