



THE LONDON SCHOOL
OF ECONOMICS AND
POLITICAL SCIENCE ■



Grantham Research Institute on
Climate Change and
the Environment

CENTRE *for* ECONOMIC
P E R F O R M A N C E

“Economics of Innovation, Diffusion, Growth and the Environment”

16-18 September 2015
Royal Society of Arts
London, United Kingdom

Conference Programme



Organising Committee

Antoine Dechezleprêtre	Joëlle Noailly	Tim Swanson
<i>Grantham Research Institute on Climate Change and the Environment, LSE</i>	<i>The Graduate Institute, Geneva</i>	<i>The Graduate Institute, Geneva</i>

Scientific Committee

Philippe Aghion	Timo Goeschl	John van Reenen
Lucas Bretschger	Ralf Martin	Rick van der Ploeg
Antoine Dechezleprêtre	Joëlle Noailly	Ralph Winkler
Baran Doda	Sjak Smulders	Cees Withagen
Dominique Foray	Tim Swanson	

Sinergia Partners

École Polytechnique Fédérale de Lausanne	ETH Zürich
Graduate Institute, Geneva	London School of Economics and Political Science

Venue & Directions

The conference will be held in the prestigious surroundings of the Royal Society of Arts (RSA) in Central London, 750m from the London School of Economics. The RSA's main building is located just behind the Strand in central London, within easy walking distance of underground and railway stations.

The address is 8 John Adam Street, London WC2N 6EZ. For a map please click [here](#) or see below.

Nearest London Underground Stations

5 minute walk: Charing Cross (Northern Line, Bakerloo Line)

5 minute walk: Embankment (District and Circle Lines, Northern Line, Bakerloo Line)

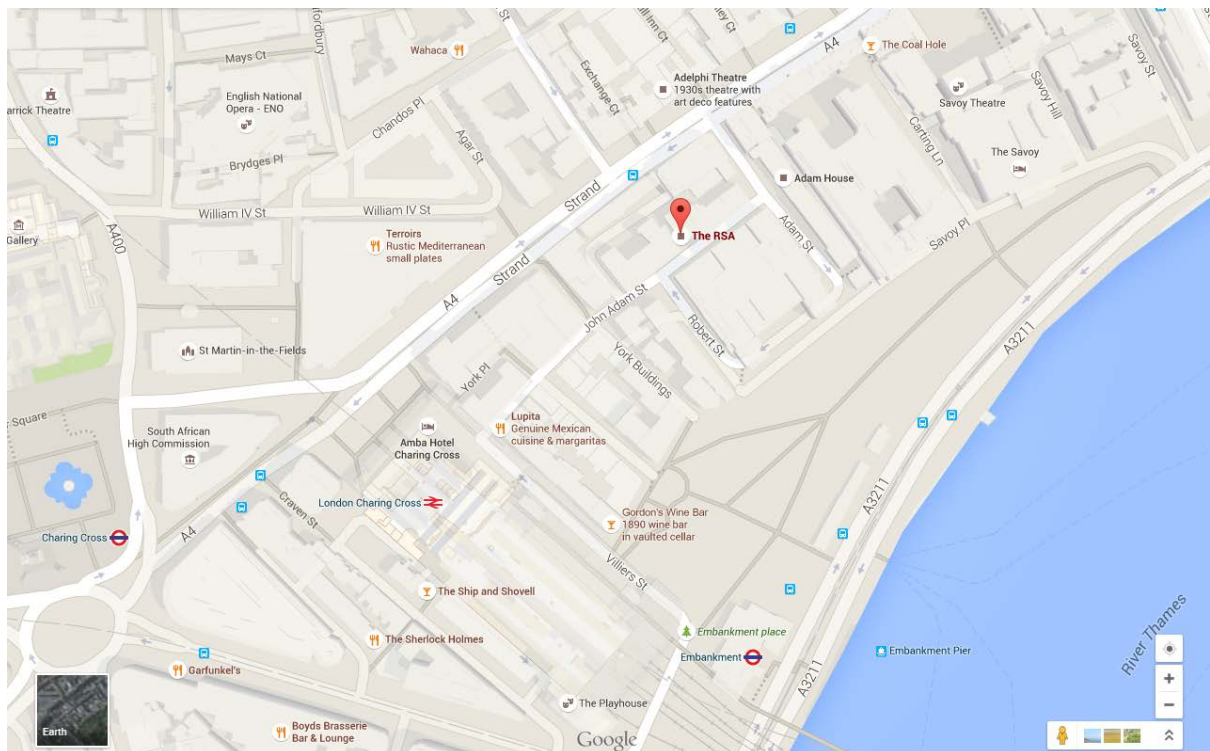
10-15 minute walk: Covent Garden (Piccadilly Line)

10-15 minute walk: Leicester Square (Piccadilly and Northern Lines)

Nearest Mainline Stations

5 minute walk: Charing Cross

15-20 minute walk: Waterloo



Programme at a glance

Wednesday 16 th September 2015		Thursday 17 th September 2015		Friday 18 th September 2015	
		08.45	Conference registration & refreshments	08.45	Conference registration & refreshments
		09.15	Keynote Lecture II David Popp, Syracuse University	09.15	Keynote Lecture III Sjak Smulders, Tilburg University
		10.30	Coffee Break	10.30	Coffee Break
		11.00	Policy Panel	11.00	Parallel Session IV Lunch
13.45	Conference registration & refreshments	13.00	Lunch	13.00	Lunch
14.15	Keynote Lecture I Philippe Aghion, Harvard University	14.00	Parallel Session II	14.00	Parallel Session V
15.30	Coffee Break	16.00	Coffee Break	16.40	End of Conference
16.00	Parallel Session I	16.30	Parallel Session III		
18.00	End of Day I	18.30	End of Day II		
		19.00	Conference Dinner		

Information on Parallel Sessions:

Each Parallel Session has 3 papers (except the final session on Friday which has 4 papers). Parallel Sessions have discussants. Each presenter will have about 25 minutes for his/her presentation, followed by 5 minutes for the discussant and 10 minutes for audience questions and answers (Q&A). Each paper (presentation, discussion, and Q&A) is allocated no more than 40 minutes, which will be strictly enforced by the session chair.

Programme

Wednesday 16th September 2015

13.45 **Conference registration & refreshments**
(Benjamin Franklin Room)

14.15 **Keynote Lecture I – Prof. Philippe Aghion, Harvard University**
(Great Room)

15.30 **Coffee Break**
(Benjamin Franklin Room)

16.00 **Parallel Session I**

Energy Transitions

Rick van der Ploeg *Abandoning fossil fuel: how fast and how much*

Roger Fouquet *A historical perspective on the development of energy technologies*

Dirk-Jan van der Ven *The historical effects of shocks in accelerating energy transitions: a threshold approach*

Directed technical change (session I)

Rob Hart *Crowding in clean investment: climate policy and the long-run returns to factor-specific investment*

Francesco Ricci *Efficiency improvements in the use of a non-renewable resource: the case of coordination failures*

Gerard van der Meijden *Carbon lock-in: the role of expectations*

Technology adoption

Ana Espinola-Arredondo *The impacts of environmental taxes on firms' technology and entry decisions*

Herman Vollebergh *Reducing rents from energy technology adoption programs by exploiting observable information*

Francesco Vona *Green skills*

18.00 **End of Day**

Thursday 17th September 2015

08.45

Conference registration & refreshments
(Benjamin Franklin Room)

09.15

Keynote Lecture II – Prof. David Popp, Syracuse University
(Great Room)

10.30

Coffee Break
(Benjamin Franklin Room)

Policy Panel
11.00-13.00
(Great Room)

International cooperation and low-carbon technologies: what role can international cooperation and dialogue play in advancing the development and diffusion of low carbon technologies?

Chair

Professor Lord Nicholas Stern

*I.G. Patel Chair of Economics and Government, Chair Grantham Research Institute on Climate Change and the Environment
London School of Economics*

Panellists

Jean-François Gagné
*Head of the Energy Technology Policy Division,
International Energy Agency*

Professor Ambuj D. Sagar
*Vipula and Mahesh Chaturvedi Professor of Policy Studies,
Indian Institute of Technology Delhi*

Matthew Knight
*Head of Strategy and Government Relations,
Siemens*

Dr Matthew Kennedy
*Chair, Climate Technology Centre Network;
Member, UNFCCC Technology Executive Committee*

13.00

Lunch
(Benjamin Franklin Room)

Thursday 17th September 2015 (cont'd)

14.00

Parallel Session II

Porter Hypothesis

Pierre Mohnen

Revisiting the Porter Hypothesis: an empirical analysis of green innovation for the Netherlands

Mark Cohen

The impact of environmental regulation on firm competitiveness: a meta-analysis of the Porter Hypothesis

Damien Dussaux

A new test of the Porter Hypothesis

Energy-saving technical change

Johanna Vogel

The bias of technological change in Europe

Jules-Daniel Wurlod

How much is green innovation driving the decline of energy-intensity across sectors? An empirical analysis for OECD countries

Jan Witajewski-Baltvilks

Directed technological change and energy efficiency improvements

Growth

Andreas Schäfer

Dirty history versus clean expectations: can energy policies provide momentum for growth?

Alexandra Vinogradova

Growth and mitigation policies with uncertain climate damage

Armon Rezai

Intergenerational inequality aversion, growth and the role of damages: Occam's rule for the global carbon tax

16.00

Coffee Break (Benjamin Franklin Room)

Thursday 17th September 2015 (cont'd)

16.30

Parallel Session III

Productivity

Claudia Pellegrin

Green process innovation and production cost savings

Ankai Xu

Environmental regulation on firms' competitiveness: an empirical examination with Chinese firm data

Tomasz Koźluk

Environmental policies and productivity growth: evidence across industries and firms

Directed technical change (session II)

Matthieu Glachant

When strengthening environmental regulation reduces green innovation: theory and evidence from the auto industry

Kyle Meng

Path dependence in U.S. coal-fired electricity

Joëlle Noailly

Environmental policy, multinational firms and green innovation

Renewables

Stefan Ambec

Environmental policy with intermittent sources of energy

Marc Baudry

Market pull instruments and the development of wind power in Europe: a counterfactual analysis

Laura Diaz Anadon

Mind the gaps – why hasn't Chinese wind power lived up to its technical potential

18.30

End of Day

18.45

Conference Dinner
(Benjamin Franklin Room)

Friday 18th September 2015

08.45	Conference registration & refreshments <i>(Benjamin Franklin Room)</i>
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09.15	Keynote Lecture III – Prof. Sjak Smulders, Tilburg University <i>(Great Room)</i>
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10.30	Coffee Break <i>(Benjamin Franklin Room)</i>
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11.00	Parallel Session IV
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Directed technical change (session III)

Corrado di Maria	<i>The cost of environmental policy under induced technical change</i>
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Julien Daubanes	<i>Green paradox and directed technical change: the effect of subsidies to clean R&D</i>
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Giulia Valacchi	<i>Directed technical change and natural resources: the tragedy of the locals</i>
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Elasticity of substitution

Claudio Baccianti	<i>The aggregate elasticity between clean and dirty inputs, multiple energy demands and innovation</i>
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Marianne Saam	<i>Substitution between clean and dirty energy inputs – a macroeconomic perspective</i>
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Clas Eriksson	<i>Phasing out a polluting input</i>
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International technology diffusion

Julie Ing	<i>When being a good Samaritan? The incentives to green technology transfer</i>
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Suchita Srinivasan	<i>The light at the end of the tunnel: the impact of policy on the global diffusion of fluorescent lamps</i>
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Mare Sarr	<i>Will technological change save the world? Technological diffusion and the choice of development path</i>
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13.00	Lunch <i>(Benjamin Franklin Room)</i>
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Friday 18th September 2015 (cont'd)

14.00

Parallel Session V

Trade

Mirabelle Muûls

International outsourcing and innovation in clean technologies

Carolyn Fischer

Strategic subsidies for green goods

Chiara Ravetti

Invisible handshakes: green shocks, labour institutions and coal miners in South Africa

Lin Zhang

On research sector: productivity, efficiency, and spillovers

Knowledge spillovers

Christos Karydas

Optimal R&D subsidies in the presence of intersectoral and intertemporal knowledge spillovers

Antoine Dechezleprêtre

Knowledge spillovers from clean and dirty technologies

Elena Verdolini

Intra-EU knowledge flows in the renewable energy sector: a patent citation analysis

Emilson Silva

Overlapping international green R&D agreements

Environmental policy instruments

Brita Bye

The impacts of alternative policy instruments on environmental performance: a firm level study of temporary and persistent effects

Frans de Vries

Dynamic efficiency in experimental emissions trading markets with investment uncertainty

Giovanni Marin

The impact of emission trading schemes on market power: an empirical analysis of the EU ETS

Cees Withagen

Optimal carbon capture policies

16.40

End of Conference

Conference Participants

Participant	Affiliation
Philippe Aghion	Harvard University
Stefan Ambec	Toulouse School of Economics
Claudio Baccianti	Centre for European Economic Research (ZEW)
Marc Baudry	EconomiX
Lucas Bretschger	ETH Zürich
Brita Bye	Statistics Norway
Federica Coelli	University of Oslo
Mark Cohen	Owen Graduate School of Management, Vanderbilt University
Adam Daigneault	Landcare Research - Manaaki Whenua
Julien Daubanes	ETH Zürich
Frans de Vries	University of Stirling Management School
Antoine Dechezleprêtre	Grantham Research Institute, LSE
Corrado Di Maria	University of East Anglia
Laura Diaz Anadon	University College London
Baran Doda	Grantham Research Institute, LSE
Damien Dussaux	Grantham Research Institute, LSE
Florian Egli	Graduate Institute, Geneva
Clas Eriksson	Mälardalen University
Ana Espinola-Arredondo	Washington State University
Carolyn Fischer	Resources for the Future
Roger Fouquet	Grantham Research Institute, LSE
Matthieu Glachant	MINES ParisTech
Felix Grey	University of Cambridge
Regina Gusmao	University College London
Rob Hart	Swedish University of Agricultural Sciences
Julie Ing	ETH Zürich
Christos Karydas	ETH Zürich
Tomasz Koźluk	Organisation for Economic Cooperation and Development
Giovanni Marin	Institute for Advanced Studies Lucca
Kyle Meng	University of California, Santa Barbara
Pierre Mohnen	United Nations University/Maastricht University
Mirabelle Muûls	London School of Economics (LSE)
Diana Nefiodow	Independent Consultant, Kondratieff Cycles
Joëlle Noailly	Graduate Institute, Geneva
Claudia Pellegrin	École polytechnique fédérale de Lausanne (EPFL)
Paul Pizzala	Climate Risk Ltd
David Popp	Syracuse University
Chiara Ravetti	Graduate Institute, Geneva
Armon Rezai	Wirtschaftsuniversität Wien – Vienna University of Economics & Business
Francesco Ricci	Université de Montpellier
Marianne Saam	Centre for European Economic Research (ZEW)
Marre Sarr	University of Cape Town

Participant	Affiliation
Andreas Schäfer	ETH Zürich
Emilson Silva	University of Alberta
Sjak Smulders	Tilburg University
Suchita Srinivasan	Graduate Institute, Geneva
Thomas Stoerk	Grantham Research Institute, LSE
Tim Swanson	Graduate Institute, Geneva
Luca Taschini	Grantham Research Institute, LSE
Tania Theoduloz	University of Cape Town
Giulia Valacchi	Graduate Institute, Geneva
Simone Valente	University of East Anglia
Gerard van der Meijden	VU University Amsterdam
Rick van der Ploeg	University of Oxford
Dirk-Jan van der Ven	Basque Centre for Climate Change
Chris Vellacott	Pictet Asset Management
Elena Verdolini	FEEM - Fondazione Eni Enrico Mattei
Alexandrea Vinogradova	ETH Zürich
Johanna Vogel	Austrian Institute of Economic Research
Herman Vollebergh	PBL Netherlands Environmental Assessment Agency
Francesco Vona	OFCE SciencesPo and SKEMA Business School
Jan Witajewski-Baltvilks	FEEM - Fondazione Eni Enrico Mattei
Cees Withagen	VU University Amsterdam
Jules-Daniel Wurlod	Graduate Institute, Geneva
Ankai Xu	Graduate Institute, Geneva
Lin Zhang	ETH Zürich