



**15<sup>th</sup>**  
**Globelics**



International Conference

11-13 October 2017 | Athens | Greece

**Innovation and Capacity Building  
in the Context of Financialisation and  
Uneven Development of the Global Economy:  
New Roles for the State, Productive Sector  
and Social Actors**



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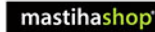
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## National Technical University of Athens (NTUA)



**The National Technical University of Athens (NTUA) is celebrating 180 years of history in 2017.** Founded in 1837, NTUA is the oldest Technical University in Greece and a prestigious University of Science and Technology, with eight Engineering Schools and a ninth School of Applied Mathematical and Physical Sciences. Faculty includes more

than 500 members, along with 4000 researchers (research associates, post doc researchers, doctoral students, and other staff), and almost 24000 students. According to the QS World Universities Ranking 2016, NTUA is the leading academic institution in Greece and among the top-10 most active European universities and research institutes in the EU-funded Framework Programmes. Moreover, out of the 120.000 qualified engineers active today in Greece, over 40% are NTUA graduates.

A glorious moment in its history relates to the Uprising of November 1973, when students gathered at the Patisision Campus, struggling against the dictatorship. The protest ended on November 17th with the unprovoked intervention of army tanks and the attack by the army and police against those besieged inside the NTUA Campus. Several demonstrators were killed and many more were arrested by the military police. The Junta fell a few months later and NTUA is being commemorated every year on November the 17th by the students at all levels, political parties, and the people of Greece in general.

## Laboratory of Industrial and Energy Economics (LIEE / NTUA)



**The Laboratory of Industrial and Energy Economics (LIEE) is an educational and research unit at the National Technical University of Athens (NTUA).** Founded in the late 1980's, it is a well-established unit in European and national socioeconomic, policy and strategy research. Its research activities involve four main areas: i) Economic and

Strategic Analysis of Industry, Innovation, Technology and Entrepreneurship, ii) Energy and Environmental policy, iii) Operations Research and Management Science, and iv) Information Society and Knowledge-based economy. LIEE is the most active Greek research unit in EU-funded socio-economic research in the context of Framework Programmes. Research activities are entirely funded through national and European research contracts (more than 130 research projects during the last 30 years) assigned mainly on a competitive basis. Moreover, LIEE has established strong links with government departments, industrial associations, local authorities and other partners both in the public and private sector.

LIEE is based in the School of Chemical Engineering, which is proudly celebrating its 100th anniversary, this October, as it was founded in 1917. The School has gained significant reputation through time, both nationally and internationally, and transformed into a modern School of Chemical Engineering, while it continuously evolves by introducing new courses and intensifying its research activities. Since the mid 60's, the School has been developing educational and research activities in the field of economics and business --since 1994 these are offered by LIEE-- aiming at educating engineering students able to understand the economic environment and deal with complex techno-economic and innovation systems.

## Institute of Communication and Computer Systems (ICCS)



The Institute of Communication and Computer Systems (ICCS) of the School of Electrical and Computer Engineering (ECE) of NTUA was founded in 1992. It supports top-quality research, development activities and scientific services to private and public bodies. Its research priorities are mainly funded through the competitive calls of the European Commission, but also the private sector. ICCS tries to build a research personnel base alongside ECE's faculty so

as to conduct state-of-the-art research and at the same time improve the School's research facilities and infrastructures.

ICCS has established - in cooperation with LIEE and the Greek Mobile Operators Association - an incubator for the valorization of research conducted at the NTUA and promotion of tech-entrepreneurship in the broader ICT area.

## **Globelics Scientific Board**

**Judith Sutz** (President)  
University of the Republic, Uruguay

**Abdelkader Djeflat**  
University of Lille 1, France

**Ann Njoki Kingiri**  
African Centre for Technology Studies, Kenya

**Birgitte Gregersen**  
Aalborg University, Denmark

**Bitrina Diyamett**  
Science, Technology and Innovation Policy Research Organization, Tanzania

**David Kaplan**  
University of Cape Town, South Africa

**Erkan Erdil**  
Middle East Technical University, Turkey

**Erkki Kaukonen**  
University of Tampere, Finland

**Franco Malerba**  
ICRIOS, Bocconi University, Italy

**Gabriela Dutrénit**  
Universidad Autónoma Metropolitana, México

**Joanna Chataway**  
SPRU, University of Sussex, UK

**Jorge Niosi**  
University of Quebec, Canada

**José Cassiolato**  
REDESIST, Federal University of Rio de Janeiro, Brazil

**K.J. Joseph**  
Centre for Development Studies, India

**Keun Lee**  
Seoul National University, Republic of Korea

**Mammo Muchie**  
Tshwane University of Technology, South Africa

**Rajah Rasiah**  
University of Malaya, Malaysia

**Susan Cozzens**  
Georgia Institute of Technology, USA



## Globelics Secretariat

At the end of 2016 the function of the Globelics Secretariat has moved from Aalborg University, Denmark to Rio de Janeiro, Brazil and Prof. José Cassiolato, coordinator of the Research Network on Local Productive and Innovative Systems (REDESIST) of the Economics Institute (IE) at Federal University of Rio de Janeiro (UFRJ), has taken over the role as Secretary General.

### Members

**José Cassiolato** (Secretary General)

Professor, REDESIST/IE-UFRJ

**Marina Szapiro**

Professor, REDESIST/IE-UFRJ

**Marcelo Matos**

Researcher/Professor, REDESIST/IE-UFRJ

**Maria Gabriela Podcameni**

Researcher/Professor, REDESIST/IE-UFRJ

**Cecilia Tomassini**

Researcher, REDESIST/IE-UFRJ

**Israel Sanches Marcellino**

Researcher, REDESIST/IE-UFRJ

**João Marcos Hausmann Tavares**

Researcher, REDESIST/IE-UFRJ

**Manuel Gonzalo**

Researcher, Universidad Nacional de General Sarmiento (UNGS) & REDESIST/IE-UFRJ

**Maria Martha de Brito**

Researcher, REDESIST/IE-UFRJ

**Max Humbert Santos**

ICT Coordinator, REDESIST/IE-UFRJ

**Fabiane Moraes**

Administrative Management, REDESIST/IE-UFRJ

**Tatiane Moraes**

Administrative Management, REDESIST/IE-UFRJ

**Eliane Alves de Souza**

Administration Assistant, REDESIST/IE-UFRJ

## The Globelics Athens 2017 Local Organising Committee



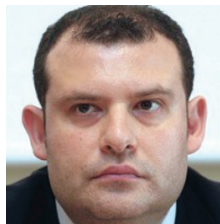
**Yannis Caloghirou,**  
(Chairman), Professor of Economics of Technology and Industrial Strategy, Director of the Laboratory of Industrial and Energy Economics (LIEE), National Technical University of Athens (NTUA)



**Nectarios Koziris,**  
Professor of Computer Science, Dean of the School of Electrical and Computer Engineering at NTUA



**Danae Diakoulaki,**  
Professor of Economic Analysis and Policy with focus on Energy and Environment, LIEE/NTUA



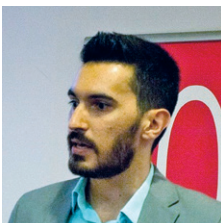
**Aggelos Tsakanikas,**  
Assistant Professor of Economic Evaluation of Technological Systems, LIEE/NTUA



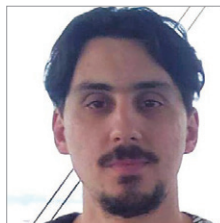
**Aimilia Protogerou,**  
Senior Researcher in the field of Economics and Strategic Management of Technology and Business, LIEE/NTUA



**Ioanna Kastelli,**  
Senior Researcher in the field of Industrial and Technology Economics, LIEE/NTUA



**Evangelos Siokas,**  
Ph.D in Economic and Strategic Analysis of Technology and Innovation, LIEE/NTUA, Coordinator of the research and entrepreneurship node EPIInoo – NTUA



**Panagiotis Panagiotopoulos,**  
Ph.D in Economic and Strategic Analysis of Information and Communication Technologies, LIEE/NTUA



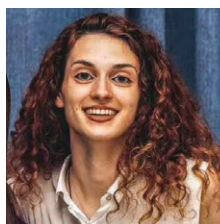
**Nikos Kanellos,**  
Ph.D in Economic and Strategic analysis of Innovation and New Technologies, LIEE/NTUA



**George Siokas,**  
Ph.D Candidate, LIEE/NTUA, Head of the Globelics Athens 2017 Volunteers Group



**Petros Dimas,**  
Ph.D Candidate, LIEE/NTUA



**Priskilla Mousafiraki,**  
Undergraduate Student, LIEE/NTUA

# Program Overview

## WEDNESDAY, OCTOBER 11

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- 08:15** **CONFERENCE REGISTRATION** (*Foyer*)
- 09:00** Chair: Yannis Caloghirou and José Cassiolato  
**OPENING SESSION** (*Central Auditorium*)  
Short introductory speeches and greetings by:  
**JOSÉ CASSIOLATO** (Secretary General of Globelics)  
**JUDITH SUTZ** (President of the Globelics Scientific Board)  
**YANNIS CALOGHIROU** (Chairman of the Globelics Athens 2017 Local Organising Committee)  
**IOANNIS GOLIAS** (Rector of the National Technical University of Athens)  
**NECTARIOS KOZIRIS** (Institute of Communication and Computer Systems)  
**GEORGIOS NOUNESSIS** (Chairman of the Board and Director of the N.C.S.R “Demokritos”)
- 09:30** **OPENING SPEECHES** (*Central Auditorium*)  
**COSTAS FOTAKIS** (Alternate Minister for Research and Innovation)  
**ELISABETH LIPIATOU** (European Commission, DG Communications Networks, Content and Technology & DG Research and Innovation)
- 10:30** **OPENING LECTURES** (*Central Auditorium*)  
**BENGT-ÅKE LUNDEVALL**: “The Learning Economy and the Economics of Hope” (video presentation)  
**RICHARD NELSON**: “On the Organization and Governance of Economic Activity”
- 11:30** **COFFEE BREAK** (*Foyer*)
- 12:00** **SPECIAL SESSIONS 1**  
**Special Session 1.1**: “Democracy, development and innovation” (*Central Auditorium*)  
**Special Session 1.2**: “Financial markets, financialization of corporations, and technological innovation” (*Room 1*)  
**Special Session 1.3**: “A discussion about frameworks for promoting innovation, mutual learning and collaboration among donor agencies” (*Room 8*)
- 13:30** **LUNCH BREAK** (*Foyer*)  
AfricaLics Meeting: “AfricaLics outreach event open to all” (*Room 6*)
- 15:00** **PARALLEL PAPER SESSIONS 1** (*All Rooms*)
- 16:30** **COFFEE BREAK** (*Foyer*)
- 17:00** **KEYNOTE SPEECH**:  
“Rebuilding the Greek Economy: Progress, Puzzles and the Need for a New Policy”  
(*Central Auditorium*)  
by **NICOS CHRISTODOULAKIS**  
Chair: Franco Malerba
- 18:00** **BOOK PRESENTATIONS** (*Central Auditorium*)  
**19:00** **POSTER SESSION PRESENTATIONS** (*Room 1*)  
**20:00** **WELCOME RECEPTION** (*Foyer*)  
**21:30** Buses leaving to the hotels



## THURSDAY, OCTOBER 12

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**09:00** PARALLEL PAPER SESSIONS 2 (*All Rooms*)

**10:40** PARALLEL PAPER SESSIONS 3 (*All Rooms*)

**12:10** COFFEE BREAK (*Foyer*)

**12:30** SPECIAL SESSIONS 2

**Special Session 2.1:** "Public policies for innovation, economic and industrial development: Lessons learned, new possibilities combined with some re-emerging trends in the new global context" (*Central Auditorium*)

**Special Session 2.2:** "Towards STI indicators for inclusive development" (*Room 1*)

**Special Session 2.3:** "Transformative innovation for creative reconstruction of the Africa-Europe relation for mutual benefit" (*Room 8*)

**14:00** LUNCH BREAK (*Foyer*)

Eurolics Meeting: "Meeting to discuss the organization and future activities of Eurolics" (*Room 6*)

Meeting of the Lalic Network (*Room 26a*)

**15:15** FREEMAN LECTURE: "Innovative Enterprise and Sustainable Prosperity" (*Central Auditorium*)

By **WILLIAM LAZONICK**

Chair: Judith Sutz

**16:15** Buses leaving to cultural events

**17:15** CULTURAL EVENTS

1) New Acropolis Museum

2) National Archaeological Museum of Athens

3) Stavros Niarchos Foundation Cultural Center

4) Guided Walk: Sites of historic and cultural interest in the centre of Athens

**20:30** GALA DINNER

at "Ecali Club" located in the northern suburbs of Athens

**24:00** Buses leaving to the hotels

## FRIDAY, OCTOBER 13

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**09:00** **PARALLEL PAPER SESSIONS 4** (*All Rooms*)

**10:40** **KEYNOTE SPEECH:** "Europe is still Possible - Political Adventures in the 21st Century"  
(*Central Auditorium*)  
by **MARIA JOÃO RODRIGUES**  
Chair: Achilleas Mitsos

**11:40** **COFFEE BREAK** (*Foyer*)

**12:10** **PARALLEL PAPER SESSIONS 5** (*All Rooms*)

**13:40** **LUNCH BREAK** (*Foyer*)  
Meeting of the new Globelics Scientific Board (*Room 6*)  
Alumni Meeting (*Room 26a*)

**14:40** **SPECIAL SESSIONS 3**

**Special Session 3.1:** "Innovating out of the crisis and stagnation: Strategies for Europe"  
(*Central Auditorium*)

**Special Session 3.2:** "'Transforming Innovation': How do ideas about transformative change impact on innovation systems thinking?" (*Room 1*)

**16:15** **LOCAL INDUSTRY PANEL:**

"The Greek productive system in the post crisis era: A pattern for an effective transformation through innovation and sustainable development" (*Central Auditorium*)  
Chair: Aggelos Tsakanikas

**17:45** **CLOSING SESSION** (*Central Auditorium*)

Farewell addresses by:

**JOSÉ CASSIOLATO** (Secretary General of Globelics)

**YANNIS CALOGHIROU** (Chairman of the Globelics Athens 2017 Local Organising Committee)

**GEORGE OWUSU ESSEGBEY** (Chairman of the Globelics Accra 2018 Local Organising Committee)

**18:30** Buses leaving to the hotels

**18:30** **COFFEE BREAK** (*Foyer*)

**18:45** **GLOBELICS START-UP EVENT** (*Room 15*)

**20:45** Buses leaving to the hotels

# Opening Speeches

Wednesday, October 11, 9:30 – 10:30

Central Auditorium

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Costas Fotakis

**Alternate Minister for Research & Innovation**



Costas Fotakis has been appointed Alternate Minister for Research and Innovation in January 2015. He has been President of FORTH (Foundation for Research and Technology – Hellas), since 2011. He has also served as Director of the Institute of Electronic Structure and Laser (IESL) at FORTH (1997-2013) and he is Professor of Physics at the University of Crete. He has also served as Chairman of the Association of the Presidents of the Research Centers in Greece. Prof. Fotakis is the founder of the Laser and Applications Division of FORTH, and since 1990 has been leading the European Laser Facility at FORTH, which is currently part of the EU “LASERLAB-Europe” project, linking 26 major European laser infrastructures. He has been member of influential EU and national scientific policy panels and expert groups, including the European Strategy Forum for Research Infrastructures (ESFRI), the European Advisory Group for Research Potential, the Experts Committee for the Interim Evaluation of the EC 7th Framework Programme (Research Infrastructures), and the National Advisory Board for Research and Technology. He has also served as Chairman of the EU Advisory Group on Research Infrastructures in HORIZON 2020 and he has chaired the Expert Group on the role of Universities and Research Organizations in Smart Specialization Strategies for regional development.

## **“Start-ups and science mobilise innovation for the EU”**

Elisabeth Lipiatou

**European Commission**

**DG Communications Networks, Content and Technology & DG Research and Innovation**



Dr. Elisabeth Lipiatou is Head of Unit at Directorate General "Communications Networks, Content & Technology". Until August 2017 she was Head of Unit in Open Innovation Union and Open Sciences Directorate at Research and Innovation Directorate General. She led the Unit "Open and inclusive Societies" which deals with social and economic research with emphasis on migration, radicalisation & inequalities. Previously, she was Head of Unit 'European Neighbourhood, Africa and Gulf', International Cooperation Directorate, contributing to the EU international cooperation policy objectives through on research and innovation. Until December 2010, she led the Unit of Climate Change and Environmental Risks, Environment Directorate and she was involved in International climate science policy negotiations.

Elisabeth Lipiatou has twenty three years of experience at the European Commission in managing research-policy interface. Primary areas of responsibility include: research for policy, research & innovation, international negotiations, climate change and impacts, marine sciences & technology, sustainable development, natural hazards and risks, international cooperation policy and negotiation of international agreements, social and economic research, migration, cooperation with Member States and international stakeholders.

# Opening Lectures

Wednesday, October 11, 10:30 – 11:30  
*Central Auditorium*

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## **“The Learning Economy and the Economics of Hope”**

(video presentation)

Bengt-Åke Lundvall



Bengt-Åke Lundvall is professor in economics at Department of Business and Management at Aalborg University. His research is organized around a broad set of issues related to innovation systems, and learning economies.

Lundvall is founder of Globelics and was its Secretary General until the end of 2016. Since 1988, he has published more than 200 publications as books, journal articles, and book chapters (see [www.vbn.aau.dk](http://www.vbn.aau.dk)). His two most cited works are: Lundvall, B.-Å., (ed.) (2010), *National Systems of Innovation: Towards a Theory of Innovation and Interactive Learning*. London, Anthem.

Lundvall, B.-Å. and Johnson, B. (1994), 'The Learning Economy', *Journal of Industry Studies*, Vol. 1, No. 2, pp. 23-42.

### New books:

Lundvall, B.-Å. (2016), *The Learning Economy and the Economics of Hope*, London, Anthem.

Chaminade, C., Lundvall, B.-Å. and Shagufta, H. (2017), *Advanced Introduction to National Systems of Innovation*, London, Elgar.

## **“On the Organization and Governance of Economic Activity”**

Richard Nelson



Richard R. Nelson is an economist by formal training. Over his career he has taught at Oberlin College, Carnegie Mellon University, Yale University, the University of Manchester, and Columbia University. He has served as research economist and analyst at the Rand Corporation, and at the President's Council of Economic Advisors. He presently is Professor of International and Public Affairs, Business, and Law, Emeritus, at Columbia University, and he works out of the Columbia Earth Institute.

His central interests have been in long-run economic change. Much of his research has been directed toward understanding technological change, how economic institutions and public policies influence the evolution of technology, and how technological change in turn induces institutional and economic change more broadly. His most cited works have included his book with Sidney Winter, *An Evolutionary Theory of Economic Change*, his *The Moon and the Ghetto*, and his *National Innovation Systems*. His most recent major publication is *Innovation and the Evolution of Industries: History Friendly Models*, which he co-authored with Franco Malerba, Luigi Orsenigo, and Sidney Winter.

He has received the Honda Prize, the Tinbergen Award, the Leontief Award, and the Veblen-Commons Award for his research, and has been awarded an honorary degree by several universities.

# Keynote Speeches

Wednesday, October 11, 17:00 – 18:00  
*Central Auditorium*

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## **“Rebuilding the Greek Economy: Progress, Puzzles and the Need for a New Policy”**

Nicos Christodoulakis



Nicos Christodoulakis is Professor of Economic Analysis at the Athens University of Economics and Business, and a Research Associate with the Hellenic Observatory at the European Institute, LSE. In 2002-2004, he served as Minister of Finance, and acting Chairman of the Eurogroup (July 2002-June 2003). During his tenure, the final negotiation of the “Taxation on Savings Directive” between the EU and Switzerland took place.

Author of several papers and books on macroeconomics and economic policy, including the “Greek Endgame: From austerity to growth or Grexit”, published by Rowman & Littlefield (2015), and “How Crises Shaped Economic Ideas and Policies”, published by Springer (2014). His latest book presents “An Economic Analysis of Conflicts”, also published by Springer (2016).

Friday, October 13, 10:40 – 11:40  
*Central Auditorium*

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## **“Europe is still Possible - Political Adventures in the 21st Century”**

Maria João Rodrigues



Maria João Rodrigues, currently Member of the European Parliament, S&D Group Vice President in charge of general coordination and interface with the other EU institutions and member of the Committees of EMPL and ECON, was Minister of Employment in Portugal and has been a policy maker working in several posts in the European Institutions since 2000, notably in the leading teams of EU Presidencies. During her work she has helped deliver important outcomes areas such as: the Lisbon Strategy and the EU2020 Strategy; the EU agenda for globalization and the strategic partnerships with the USA, China, Russia, India and Brazil for a new growth model; policy; the new Erasmus for mobility, New Skills for New Jobs; responses to Pillar of Social Rights. More recently The Road Map and Annual Programming for the European Union.

In academic terms, she was professor of European economic policies in the European Studies Institute - Université Libre de Bruxelles and in the Lisbon University Institute. She was also the chair of the European Commission Advisory Board for socio-economic sciences. She is author of more than one hundred publications, notably the books.

In 2017 she was also elected to become the President of FEPS, The European Foundation of Progressive Studies, with around forty foundations across Europe and the world.

# Freeman Lecture

Thursday, October 12, 15:15 – 16:15  
*Central Auditorium*

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## **“Innovative Enterprise and Sustainable Prosperity”**

William Lazonick



William Lazonick is Professor of Economics at University of Massachusetts Lowell, and President of the Academic-Industry Research Network ([www.theAIRnet.org](http://www.theAIRnet.org)). Previously, Lazonick was Assistant and Associate Professor of Economics at Harvard University, Professor of Economics at Barnard College of Columbia University, and Distinguished Research Professor at INSEAD in France. He has affiliations with SOAS, University of London; University of Ljubljana; and Institut Mines-Télécom in Paris. Lazonick earned a B.Com. at the University of Toronto, M.Sc. at London School of Economics, and Ph.D. in Economics at Harvard University. He holds honorary doctorates from Uppsala University and the University of Ljubljana.

His research focuses on the social conditions of innovation and economic development in advanced and emerging economies. His book *Sustainable Prosperity in the New Economy? Business Organization and High-Tech Employment in the United States* (Upjohn Institute 2009) won the 2010 Schumpeter Prize. His article, “Innovative Business Models and Varieties of Capitalism,” won the Henrietta Larson Award from Harvard Business School for best article in *Business History Review* in 2010 (he had previously won this prize in 1983). He received the HBR McKinsey Award for outstanding article in *Harvard Business Review* in 2014 for “Profits Without Prosperity: Stock Buybacks Manipulate the Market and Leave Most Americans Worse Off”.

The Institute for New Economic Thinking, Gatsby Foundation, European Commission, and Ford Foundation have funded his recent research on innovation, financialization, and development. For recent papers and op-eds, see <https://www.ineteconomics.org/research/experts/wlazonick>.

# Special Session 1.1

Wednesday, October 11, 12:00 – 13:30

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## **Special Session 1.1: *Democracy, development and innovation***

Location: *Central Auditorium*

Chair: **SUSAN COZZENS** (Georgia Institute of Technology, United States)

Speakers:

**TASSOS GIANNITSIS** (National and Kapodistrian University of Athens, Greece)

**RODRIGO AROCENA** (University of the Republic, Uruguay)

**KEUN LEE** (Seoul National University, Republic of Korea)

**RASIGAN MAHARAJH** (Tshwane University of Technology, South Africa)

This special session on democracy, development and innovation (in times of political and social turmoil) addresses the following points:

1. Prevailing learning and innovation trends (and policies) foster inequality.
2. Inequality fosters de-democratization:
  - (a) directly, through concentration of power and plutocratic rule (North and South)
  - (b) indirectly, through neo-fascist reactions against globalization and its consequences and against immigration (North)
  - (c) indirectly, through decreasing confidence in democracy as the road to social inclusion (South)
3. De-democratization should be faced:
  - (a) protecting freedoms, rights and constitutional republics
  - (b) connecting advances in learning and innovation with deprived sector and popular actors
  - (c) scrutinizing innovations in terms of democratization/de-democratization effects
  - (d) finding ways for democratizing innovation and design; in particular working to forge new alliances between shapers of innovations, social movements and public policies aimed at social inclusion.

All this calls for action. Some of the needed actions have well known theoretical roots; others are in need of new insights in view of the possibilities opened by recent science, technology and innovation outcomes. Both, action and insights are worth Globelics efforts: the issues at stake represent a challenge of vast consequences.

# Special Session 1.2

Wednesday, October 11, 12:00 – 13:30

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## **Special Session 1.2: *Financial markets, financialization of corporations, and technological innovation***

Location: *Room 1*

Chair: **ALEXANDROS-ANDREAS KYRTSIS** (National and Kapodistrian University of Athens)

Speaker: **CARLOTA PÉREZ** (London School of Economics / Tallinn University of Technology / Science Policy Research Unit - SPRU, University of Sussex / University College London / Anthemis Institute)

Comments:

**DINESH ABROL** (Institute for Studies in Industrial Development, New Delhi)

**JOSÉ CASSIOLATO** (Federal University of Rio de Janeiro)

**MARIO SCERRI** (Tshwane University of Technology, South Africa)

Closing Comment: **WILLIAM LAZONICK** (University of Massachusetts at Lowell)

The connection between finance and technological innovation has been variously explored by researchers in the field. As has been pointed out, risk perceptions of financiers and corporate executives, and the knowledge about projects have very often shaped the direction of R&D and innovation. Financialization of corporations and emphasis on shareholder value, as well as corporate decisions resulting from short-term oriented governance practices, have a significant impact on the appetite for innovation related risks. In this context the following questions arise: What had been the impact of the 2007-2009 financial crisis and the subsequent development of financial markets on the funding of technology intensive and innovative business ventures? What do we know from the dominant research streams? What is the state of the art in this field of inquiry, and what should be the preferable directions of research that might deliver powerful insights on the connection between financialization and innovation?



# Special Session 1.3

Wednesday, October 11, 12:00 – 13:30

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## **Special Session 1.3: *A discussion about frameworks for promoting innovation, mutual learning and collaboration among donor agencies***

Location: *Room 8*

Coordinators:

**MICHIKO IIZUKA** (United Nations University - MERIT)

**JOANNA CHATAWAY** (Science Policy Research Unit - SPRU, University of Sussex)

Speakers:

**TERESA SOOP** (Swedish International Development Cooperation Agency - SIDA)

**MATTHEW WALLACE** (International Development Research Centre – IDRC, Canada)

**TATEO ARIMOTO** (National Graduate Institute for Policy Studies - GRIPS & Centre for Research and Development Strategy - CRDS at Japan Science and Technology Agency - JST)

**TILMAN ALTENBURG** (German Development Institute - DIE)

Science, Technology and Innovation (STI), knowledge sharing and capacity building are widely recognised as essential to achieving developmental goals and are central to a large number of donor interventions and programmes. At the same time, substantial change has taken place in development aid communities with new actors and a variety of approaches to funding and assisting increased capacities in innovation.

The session will include short presentations from panelists followed by discussion. The session aims to do the following:

- Summarise some of the emerging trends in aid agencies;
- Compare and document different agencies' programmes, projects and initiatives in the field of STI especially in relation to current initiatives undertaken by 'traditional' donor agencies in Europe, America and Asia;
- Explore the use of different policy frameworks such as entrepreneurship, innovation systems and transformative innovation policy as a guide to interventions;
- Discuss main enablers and barriers and begin to generate common research and evaluation questions;
- Discuss possible avenues to enabling new types of collaboration among emerging stakeholders and research communities as well as among traditional donors;
- Identify future research proposals that address pressing issues for donor agencies engaging with the issue of innovation and policy learning.

# Special Session 2.1

Thursday, October 12, 12:30 – 14:00

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## **Special Session 2.1: *Public policies for innovation, economic and industrial development: Lessons learned, new possibilities combined with some re-emerging trends in the new global context***

Location: *Central Auditorium*

Chair: **YANNIS CALOGHIROU** (Professor of Economics of Technology and Industrial Strategy, National Technical University of Athens)

Panelists:

**FRANCO MALERBA** (Professor of Applied Economics, Bocconi University, Milan, Italy): “Industrial Policy as a necessary tool for innovative development and growth in Sectoral Systems: Empirical Evidence and theoretical explorations for catch-up countries”

**KEUN LEE** (Professor of Economics, Seoul National University, Republic of Korea): “Industrial Policy for Smart Specialization: Avoiding both target and design failures”

**COSTIS VAITSOS** (Professor Emeritus of Political Economy, National and Kapodistrian University of Athens, Greece): “The reemergence of nationalism in supranational institutions within alternative European economic integration schemes”

**GABRIELA DUTRÉNIT** (Professor of Economics of Innovation, Universidad Autónoma Metropolitana, Mexico): “STI policy in a context of inequality: The dilemma between competitiveness and national problems”

Public policy has proved fundamental for innovation, economic and industrial development and catch-up. There are now many lessons that can be learned from the results obtained from an active involvement of the government in innovative and industrial activity and industry evolution, the diffusion of new technologies and the growth of advanced and emerging economies. This panel will discuss the general evolutionary and innovation systems rationale for public policy and the main lessons derived from a wide set of interventions in advanced and in emerging economies. In addition, in terms of governance and policy context, the reemergence of nationalism in supranational institutions within alternative European economic schemes should be considered.

# Special Session 2.2

Thursday, October 12, 12:30 – 14:00

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## **Special Session 2.2: *Towards STI indicators for inclusive development***

Location: *Room 1*

Chair: **ISMAEL RÀFOLS** (Ingenio [CSIC-UPV], Universitat Politècnica de València)

Speakers:

**FRED GAULT** (United Nations University - MERIT & Institute for Economic Research on Innovation, Tshwane University of Technology, South Africa)

**ERIKA KRAEMER-MBULA** (Institute for Economic Research on Innovation, Tshwane University of Technology, South Africa)

**SLAVO RADOSEVIC** (University College London, UK)

**JUDITH SUTZ** (University of the Republic, Uruguay)

The academic community is starting to acknowledge that innovation does not necessarily lead to improvements in wellbeing, social justice or sustainability. Innovation can lead to positive social outcomes, such as higher crop yields or better healthcare, as well as negative outcomes, such as increases in inequality or destruction of the environment. However, our current systems to measure STI activities are built under conceptual models that assume that more science, more technology and more innovation are always good.

In order to foster innovation for inclusive development, we may need different types and different uses of indicators. Perhaps we need to measure STI activities in closer connection to their different effects on inclusive development. This presents challenges at multiple levels. This special session will explore several ongoing efforts to develop new STI indicators that are related or sensitive to inclusive development.

First, it is important to “domesticate” or adapt existing STI indicators in such a way that they are appropriate for specific contexts – indicators that are valid in some territories are problematic in others with different conditions. This is important for example regarding technological upgrading (Radosevic and Yoruk, 2016; Bianco, Gras and Sutz, 2016)

Second, it is necessary to capture STI activities that are currently invisible. This might involve for example, developing innovation surveys for households, governments and the informal economy (Charmes, Gault and Wunsch-Vincent, 2017) or using more comprehensive and inclusive databases on publications (Chavarro et al, 2016).

Third, STI activities need to be treated not as unidimensional scalar, but as a vector describing open socio-technical trajectories. Similar STI activities leading to similar paces of innovation may differ in their outcome in terms of inclusive development.

The panellists will introduce various efforts aimed at pluralising S&T indicators so that they better align with inclusive development, and discuss their implementation in policy.

# Special Session 2.3

Thursday, October 12, 12:30 – 14:00

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## **Special Session 2.3: *Transformative innovation for creative reconstruction of the Africa-Europe relation for mutual benefit***

Location: *Room 8*

Chair: **MAMMO MUCHIE** (Tshwane University of Technology, South Africa): “Imagining and Innovating Principled Relationship between Africa and Europe”

Panelists:

**EDWARD LORENZ** (GREDEG, University of Nice & CNRS): “Africalics-Eurolics Partnership for the Sustainable Development Goals”

**GLEND A KRUSS** (Centre for Science, Technology and Innovation Indicators of the Human Sciences Research Council, South Africa): “A Critique of the Dominant Models and Approaches to Indicators, and the Design of a New Framework that Can Assess Innovation for Inclusive Development in Africa”

**ANN NJOKI KINGIRI** (African Centre for Technology Studies Research, Kenya): “Differences in Capacity Building in Innovation and Development in the Higher Educational Institutions in Europe and Africa”

**GEORGE OWUSU ESSEGBEY** (Science and Technology Policy Research Institute of the Council for Scientific and Industrial Research, Ghana): “Science, Technology and Innovation Policy - Issues of Relevance, Instrumentality and Impact from both Cases in Europe and Africa”

The relationship between Europe and Africa has gone through major historical routes. Europe has colonised Africa and divided the continent into Franco phone, Lusophone, Anglo phone and Levantine Phone areas that still keep alive even after the colonial era has passed. Colonialism was seen as philanthropy to Africa where Europe gave civilisation, religion and commerce to Africa. There is still debate on how to look back and explain the colonial relationship in order to craft a new relationship based on equality, respect, and appreciation of a new relationship to evolve anchored on mutually beneficial values and principles. As both Europe and Africa are geographically connected, what takes place in Africa affects Europe and the vice versa. The relationship has to be innovated to emerge fully and transparently based entirely on mutual benefit in every sphere of activity. This panel will address not merely the problems in the Africa-Europe relationship from the past. The focus will be the present and the future being forward looking with transformative innovation to create a new creative reconstruction by examining specifically and systematically all the patterns of relationship in science, technology, innovation, research, knowledge, education, economics, politics and all the relevant aspects and dimensions of social and economic life. This is a call for a paradigm shift to move away from any previously mutually unbeneficial relations by discovering new and innovate ways to frame both conceptually and in practice to promote the foundational principles and values for explicit, tangible and measurable mutually beneficial relationships between Africa and Europe.

# Special Session 3.1

Friday, October 13, 14:40 – 16:10

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## **Special Session 3.1: *Innovating out of the crisis and stagnation: Strategies for Europe***

Location: *Central Auditorium*

Chair: **ACHILLEAS MITSOS** (University of the Aegean, former Director General for Research at the European Commission)

Speakers:

**JAN FAGERBERG** (University of Oslo, Norway): "Addressing the climate challenge and economic stagnation: The role of innovation policy"

**MANUEL MIRA GODINHO** (University of Lisbon, Portugal): "Research and Innovation in Southern Europe, 2007-2016: A troubled decade"

**YANNIS CALOGHIROU** (National Technical University of Athens, Greece): "Delivering on the growth promise in the peripheral European countries: How can an "innovating out of the crisis" strategy work in Greece"

**FRANK MOULAERT** (KU Leuven, Belgium): "When innovation lost its social character. Or not?"

This special session aims at highlighting the role of innovation and innovation policies for exiting out of stagnation and crisis in Europe.

The point of departure is the current debate on the problems and challenges facing different areas in Europe and Europe as a whole. It is widely accepted that many of the problems are long-term in nature and related to different capacities for adapting to changes in the Global and European environment. This leads to the suggestion that a fundamental transformation of the economy is required by adopting policies with much greater emphasis on innovation in all its forms in the context of a European strategy for sustainable growth, environmentally as well as socially.

Next, a broader analysis of research and innovation indicators will follow on Southern European countries. The idea is to assess the impact of the crisis, estimate elasticities of the relevant variables in relation to R&D indicators, the relationship with the macroeconomic policies and how those countries are getting (or not...) out of the crisis. Other dimensions of the innovation systems, including the industrial structure and specialization, and how they have affected the observed performances will also be discussed.

In the same vein, the missing dimension of the adopted policies in Greece during the 8 year crisis, combined with very tough austerity measures led to a very unbalanced policy mix. In this regard, the session will focus on the design and implementation of a system of policies based on linking knowledge, innovation entrepreneurship and capacity building which could mobilise the productive sector of the economy, the knowledge producing and diffusing organisations, and the social actors.

Finally, starting from the history of thought and practice of innovation, the trajectories of meanings and theorisation of these concept will be explored. Two questions will be discussed: How to rebound innovation with its social roots? And how this rebounding can lead to a more integrated approach to the relationship between innovation and development in all its human dimensions?

# Special Session 3.2

Friday, October 13, 14:40 – 16:10

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## **Special Session 3.2: *'Transforming Innovation': How do ideas about transformative change impact on innovation systems thinking?***

Location: *Room 1*

Chair: **JOANNA CHATAWAY** (Science Policy Research Unit - SPRU, University of Sussex)

Speakers:

**ERIKA KRAEMER MBULA** (Institute for Economic Research on Innovation, Tshwane University of Technology, South Africa)

**CHRISTINA CHAMINADE** (Department of Economic History, Lund University)

**RASIGAN MAHARAJH** (Centre for Research on Evaluation, Science and Technology, Stellenbosch University, South Africa)

As innovation systems and STS approaches evolve, they have begun to interact and inform each other in interesting ways. This session will explore some of the intersects between innovation systems thinking and analysis of transitions and transformation of socio-technical regimes. We will explore the following questions:

- What are the main points of agreement and contradiction between analysis based on innovation systems on the one hand and thinking related to socio-technical regimes and transformative innovation thinking on the other?
- Do innovation systems and transformative innovation represent different ways of framing research and innovation policy?
- What are the implications of transformation in one region or country for other geographies?

# Parallel Paper Sessions 1

Wednesday, October 11, 15:00 – 16:30

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## 1.01 INNOVATION STUDIES, DIFFERENT APPROACHES AND METHODOLOGIES 1

Room: 9, Chair: **Gabriel Yoguel**

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**RITIKA JAIN**: "Who spends more on innovation in India? Public versus private sector enterprises and the effect of external borrowing"

**JEE-HOON KI**: "An evolutionary model of changes in industrial leadership and catch-up by latecomers: Knowledge spillover, endogenous innovation, and the 'incumbent trap'"

**MAURICIO URIONA MALDONADO, SARA S. GROBBELAAR**: "System dynamics modelling in the innovation systems"

Discussant: **ISABEL BORTAGARAY**

## 1.02 INNOVATION STUDIES, DIFFERENT APPROACHES AND METHODOLOGIES 2

Room: 17, Chair: **Erkki Karo**

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**JUAN FELIPE BERRUTTI RAMPÀ, CARLOS BIANCHI**: "Assessing the effect of public funding on private innovation investment in Uruguay"

**CLAUDIA DE FUENTES, FERNANDO SANTIAGO, SERDAL TEMEL**: "Innovation barriers and the role of institutional context in emerging economies"

**NANDITHA MATHEW, MARCO GRAZZI, DANIELE MOSCHELLA**: "Efficiency, innovation, and imported inputs: Determinants of export performance among Indian manufacturing firms"

Discussant: **MICHIKO IIZUKA**

## 1.03 SCIENCE, TECHNOLOGY, INNOVATION POLICY AND DEVELOPMENT 1

Room: *Central auditorium*, Chair: **K J Joseph**

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**KEUN LEE, MARINA SZAPIRO, ZHUQING MAO**: "From Global Value Chains (GVC) to innovation systems for Local Value Chains"

**SLAVO RADOSEVIC, ICIAR DOMINGUEZ LACASA, BJORN JINDRA, MAHMOOD SHUBBAK**: "Paths of technology upgrading in the BRICS economies"

**JEONG-DONG LEE**: "Middle innovation trap: Transition failure from implementation capability to concept design capability as a source of the middle income trap"

Discussant: **MARIO SCERRI**

## 1.04 SCIENCE, TECHNOLOGY, INNOVATION POLICY AND DEVELOPMENT 2

Room: 15, Chair: **Raphie Kaplinsky**

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**JORGE NIOSI:** "Grand challenges: A new type of innovation policies? Or old wine in new bottles?"

**GABRIELA DUTRÉNIT, JOSÉ MIGUEL NATERA MARIN, MARTIN PUCHET, ARTURO TORRES-VARGAS, ALEXANDRE VERA-CRUZ:** "Innovation system, dialogue processes and STI policymaking: Stylising evidence on Latin America and the Caribbean"

**MICHAEL KAHN:** "Finding the escape shaft. From resource curse to industrial growth"

Discussant: **ISMAEL RÀFOLS**

## 1.05 INTELLECTUAL PROPERTY RIGHTS, OPEN INNOVATION AND DEVELOPMENT 1

Room: 20, Chair: **George Hondroyiannis**

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**KYRIAKOS DRIVAS:** "International collaboration and the likelihood of obtaining a patent"

**SIDHESWAR PANDA:** "IPRs, level of technology and exports: empirical evidences"

**TULIO CHIARINI, MÁRCIA SIQUEIRA RAPINI, THIAGO CALIARI, LEONARDO RIBEIRO:** "Exploratory time-trend analysis of 'electrical engineering' and 'chemistry' technological domains patents in Brazil: Lessons for developing countries"

Discussant: **CRISTIANO SANTOS**

## 1.06 GENDER INNOVATION AND DEVELOPMENT 1

Room: 27, Chair: **Ann Njoki Kingiri**

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**OPEYEMI EYITAYO AYINDE, OLAIDE BABARINDE, TAHIROU ABDOULAYE, KAYODE AYINDE, ADEOLA OREOLUWA OLOYEDE, MAMMO MUCHIE:** "Gender productivity differentials in South Guinea Savannah Region of Nigeria: A case study of drought tolerant maize variety farms"

**HASSYNA DAKHANE, MOUNYA BAALI:** "The role of women's entrepreneurship orientation in achieving sustainable development: Case of Algeria"

**WALI UR REHMAN:** "Predictors of innovative work behavior in software industry of Pakistan: Role of psychological empowerment and organizational commitment"

Discussant: **ALEXANDRA KONTOLAIMOU**

## 1.07 SECTORAL INNOVATION SYSTEM, SYSTEMIC INDUSTRIAL POLICY AND DEVELOPMENT 1

Room: 19, Chair: **Yuan Zhou**

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**LORENZO CASSINI:** "Export performance, innovation, and sectoral efficiency: An approximation from manufacture companies in Argentina 2010-2012"

**ANDRÉ LUIZ DA SILVA TEIXEIRA, MÁRCIA SIQUEIRA RAPINI, MARINA SZAPIRO:** "Discourse and practice of Brazilian industrial policy in 2005-2014: An evaluation of the sectorial distribution of resources from BNDES and FINEP"

**THEO PAPAIOANNOU, ANDREW JASON WATKINS, DINAR KALE, JULIUS T. MUGWAGWA:** "The role of industrial associations in shaping innovation through systemic integration: The cases of India and South Africa"

Discussant: **NICHOLAS S. VONORTAS**



## 1.08 INNOVATION SYSTEMS, NETWORKS, GLOBAL VALUE CHAINS AND FOREIGN DIRECT INVESTMENTS 1

Room: 8, Chair: **Roman Jurowetzki**

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**MARTIN KANG'ETHE GACHUKIA**: "Impact of food value chain governance determinants on innovation competitiveness: Evidence from Kenya horticultural exporters"

**ABDELKADER DJEFLAT, ABDENASSER MAAREF**: "The knowledge transfer from local parent firm to the joint-venture in the South: Examining the determinants factors"

**CRISTINA CHAMINADE, MARKUS GRILLITSCH**: "Bridging the gap: Exploring the relationship between citizenship diversity of the employees and global innovation networks"

Discussant: **BERNHARD TRUFFER**

## 1.09 ENTREPRENEURSHIP AND INNOVATION MANAGEMENT 1

Room: 1, Chair: **Rodrigo Arocena**

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**FRANCO MALERBA, MAUREEN MCKELVEY**: "Knowledge intensive entrepreneurship: Going beyond the Schumpeterian entrepreneur"

**YANNIS CALOGHIROY, AIMILIA PROTOGEROU, AGGELOS TSAKANIKAS**: "Heterogeneity in knowledge intensive entrepreneurship: An exploratory exercise in young European firms"

**ESIN YORUK**: "Patterns of entrepreneurial and intrapreneurial growth driven by the fit between micro and macro environments"

Discussant: **SPYROS ARVANITIS**

## 1.10 ENTREPRENEURSHIP AND INNOVATION MANAGEMENT 2 (SOCIAL ENTREPRENEURSHIP AND DEVELOPMENT)

Room: 26a, Chair: **Rasigan Maharajh**

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**DINAR KALE**: "Social Technologies for Inclusive Innovation: Investigating development of affordable healthcare technologies for low income populations in developing countries"

**WANNA PRAYUKVONG, JAMES HOOPES**: "A Buddhist economics approach to innovation and capacity building: The case of Siam Hands"

**BASKARAN ANGATHEVAR, MINGFENG TANG, THIRUCHELVAM KANASUNDRAM, SHARIFAH MUHAIRAH SHAHABUDIN, THERESA S.Y. CHAN**: "Social entrepreneurship and inclusive growth: Attributes, perceptions and roles of business incubators and intermediaries in Malaysia"

Discussant: **GUANNAN XU**

## 1.11 TECHNOLOGICAL INFRASTRUCTURE AND TECHNOLOGICAL CAPABILITIES 1

Room: 6, Chair: **Roberta Rbellotti**

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**ANIRBAN BISWAS:** "Technological capability in Indian manufacturing firms: A study of the determinants of R&D"

**ADEYEMI OLUWASEUN ADEPOJU, JOSHUA AKARAKIRI, JOHN FELIX-KAYODE AKINBAMI:** "Framework for building technological capability in the Nigerian solar energy industry using structural equation modelling"

**RAJAH RASIAH:** "The challenge of technological upgrading: The development of integrated circuits manufacturing in Malaysia, and Thailand"

Discussant: **SHYAMA VENKATA RAMANI**

## 1.12 AGRICULTURAL INNOVATION SYSTEMS 1

Room: 26b, Chair: **Andrew Roberts Cummings**

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**SUCHIRADIPTA BHATTACHARJEE, SARAVANAN RAJ:** "Linkage of food security: Social network analysis and stakeholder analysis in agricultural innovation systems in North Eastern India"

**PATRICIA NOEMI GUTTI, YAMILA KABABE, FERNANDO PEIRANO:** "Diffusion of innovations in the sectors based on biological processes. The case of sugarcane in Tucumán, Argentina"

**ANURAG KANAUJIA, SUJIT BHATTACHARYA:** "The Genetically Modified (GM) food debate in India: A critical introspection"

Discussant: **OLGA MIKHEEVA**

# Parallel Paper Sessions 2

Thursday, October 12, 09:00 – 10:30

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## 2.01 INNOVATION STUDIES, DIFFERENT APPROACHES AND METHODOLOGIES 3

Room: 9, Chair: **Alexandre Vera-Cruz**

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**FLORENCIA BARLETTA, DIANA SUÁREZ, GABRIEL YOGUEL:** "R&D profiles in manufacturer firms in Argentina: The role of capabilities."

**YANGAO XIAO, JIAJIA LIU, ANDREW BODDAN TYLECOTE:** "Incumbent latecomer firms' strategy during the emergence of new technology trajectories: Four cases from China"

**NAJMODDIN YAZDI, JAVAD NOORI, ALI MALEKI, MAHDI BAGHERI NASRABADI, ALI REZA BABAKHAN:** "Impacts of firm size on innovation based on quality data from a developing context"

Discussant: **THEO PAPAIOANNOU**

## 2.02 UNIVERSITY RELATIONSHIPS WITH INDUSTRY AND SOCIETY 1

Room: 17, Chair: **Birgitte Gregersen**

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**PAOLA RÜCKER SCHAEFFER, BRUNO FISCHER, NICHOLAS S. VONORTAS:** "Backbones of the knowledge economy? Universities and the dynamics of technology upgrading in a developing country"

**RODRIGO AROCENA, BO UNO GOERANSSON, JUDITH SUTZ:** "Universities in innovation systems: Connectedness and alternative research evaluation metrics"

**CECILIA ALEJANDRA RIKAP, DAVID FLACHER, HUGO HARARI-KERMADEC:** "What is beneath Singapore's integration to the global HE system?"

Discussant: **GLENDA KRUSS**

## 2.03 SCIENCE, TECHNOLOGY, INNOVATION POLICY AND DEVELOPMENT 3

Room: *Central auditorium*, Chair: **Ioanna Kastelli**

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**SANTANU ROY, JAY MITRA:** "Assessment of quality performance of public R&D in India and the strategic role of knowledge management: Evidence from a longitudinal study"

**MANISH ANAND:** "Research and innovation capabilities: Insights on India's plunge into nanotechnology"

**SPYROS ARVANITIS, FLORIAN SELIGER, MARTIN WOERTER:** "Knowledge spillovers and their impact on innovation success - A new approach using patent backward citations"

Discussant: **ERKKI KARO**

## 2.04 SCIENCE, TECHNOLOGY, INNOVATION POLICY AND DEVELOPMENT 4

Room: 15, Chair: José Borello

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**SAAHIER PARKER:** "Toward mapping a culture of science in South Africa"

**SNEHA SINHA:** "Shaping of science in India: Role of the Indian Science Congress Association, 1914-1947"

**JEFFREY OROZCO, LUIS BARBOZA:** "Dialogues for the generation of indicators of STI in Costa Rica"

Discussant: NANDITHA MATHEW

## 2.05 INDIGENOUS KNOWLEDGE, INFORMAL SECTOR, INNOVATION AND DEVELOPMENT 1

Room: 20, Chair: Dinesh Abrol

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**PAOLA LORENA CARRASCO ROCHA:** "Inclusive innovation: Definition framework"

**ERNESTO ANDRADE-SASTOQUE, ALEJANDRO BALANZO:** A notion of innovation system the quality we need it: Addressing the problem of blind spots"

**PATRICK MARIE NGA NDJOB, YVES ABESSOLO, MICHEL FREDDY HARRY YAMBEN:** "Governance, skilled migration and human capital formation: Evidence from Sub-Saharan Africa – OECD migration"

Discussant: ABDELRAEQ SUYUTI NA-ALLAH

## 2.06 NATIONAL, CONTINENTAL AND REGIONAL INNOVATION SYSTEM 1

Room: 27, Chair: Mammo Muchie

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**MARIO SCERRI:** "The viability of systems of innovation"

**MIKA RAUNIO, NADJA ANNA MARIKA NORDLING:** "Open innovation platforms in regional innovation policy ecosystems and emerging business lead policy framework in the case of Tampere, Finland"

**JOSE CASSIOLATO, HELENA LASTRES, MARINA SZAPIRO, MARCELO MATOS:** "Local production and innovation systems in Brazil: It was 20 years ago today"

Discussant: MARC GUISLAIN HUMBERT

## 2.07 SECTORAL INNOVATION SYSTEM, SYSTEMIC INDUSTRIAL POLICY AND DEVELOPMENT 2

Room: 19, Chair: Klas Eric Soderquist

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**TARMO LEMOLA, RAIMO JUHANI KULLERVO LOVIO:** "The role of the government sector in the break-through and growth of the Finnish telecom industry"

**GUANNAN XU, YUCHEN WU, YUAN ZHOU:** "Understanding the role of knowledge creators in emerging innovation ecosystems: A case of 3D printing in China"

**DIMITRA KOPIDOU, AGGELOS TSAKANIKAS, DANAE DIAKOULAKI:** "The dynamics of the food & drink industry and their environmental and social implications in selected European countries"

Discussant: CECILIA TOMASSINI

## **2.08 INNOVATION SYSTEMS, NETWORKS, GLOBAL VALUE CHAINS AND FOREIGN DIRECT INVESTMENTS 2**

Room: 8, Chair: **David Ellis Kaplan**

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**BENGT-ÅKE LUNDVALL, JAN FAGERBERG, MARTIN SRHOLEC:** "National innovation systems, openness and global value chains: Towards a taxonomy"

**ROBERTA RABELLOTTI, VITO AMENDOLAGINE, ANDREA PRESBITERO, MARCO SANFILIPPO:** "Global value chains and local sourcing: An empirical analysis on Sub-Saharan Africa and Vietnam"

**JUN JIN, MAUREEN MCKELVEY:** "How overseas R&D centre to maximize the benefits after cross-board M&A: Case of CEVT of Geely Group"

Discussant: **JORGE NIOSI**

## **2.09 ENTREPRENEURSHIP AND INNOVATION MANAGEMENT 3 (SOCIAL ENTREPRENEURSHIP AND DEVELOPMENT)**

Room: 26a, Chair: **Rigas Arvanitis**

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**NAYELI MARTÍNEZ, GABRIELA DUTRÉNIT:** "Determining factors and nature of innovation in the process of a paradigmatic Mexican innovative social entrepreneurship"

**SHIRLEY PATRICIA CABERO TAPIA:** "Institutional entrepreneurs: An evolutionary approach"

**BALAJI PARTHASARATHY, YUKO AOYAMA:** "Beyond the impasse of the state-market dichotomy: Social entrepreneurship and new institutional actors for the underserved"

Discussant: **MANUEL GONZALO**

## **2.10 ENTREPRENEURSHIP AND INNOVATION MANAGEMENT 4**

Room: 1, Chair: **Abdelkader Djeflat**

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**PANAGIOTIS PANAGIOTOPOULOS, YANNIS CALOGHIROU, AIMILIA PROTOGEROU:** "Organisational resources and capabilities relating to ICTs utilisation by local authorities: An empirical testing in Greek municipalities"

**TOMOHIRO MACHIKITA, YASUSHI UEKI:** "Roles of top management characteristics, human resource management, and customer relationships in innovative firms in Southeast Asia"

**MASATSUGU TSUJI, HIROKI IDOTA, YASUSHI UEKI, HIDENORI SHIGENO, TERUYUKI BUNNO:** "Comparative analysis of formal and informal R&D for innovation in firms in ASEAN Countries"

Discussant: **CRISTINA RIBEIRO LEMOS**

## 2.11 SCIENCE, TECHNOLOGY, INNOVATION AND SUSTAINABLE DEVELOPMENT GOALS 1

Room: 6, Chair: **Joanna Chataway**

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**MICHAEL P. SCHLAILE, SOPHIE URMETZER, ALLAN DAGL ANDERSEN, JOB TIMMERMANS, VINCENT BLOK, JAN FAGERGERG, MATTHIAS MUELLER, ANDREAS PYKA:** "Innovation systems for transformations towards sustainability? A normatively infused reflection"

**ISABEL SALAVISA:** "Innovation and sustainability: A contribution to an integrated approach"

**XIAO-SHAN YAP, BERNHARD TRUFFER:** "Sustainability transitions and technological catch-up: Guidance of search as a strategic mechanism for leapfrogging"

Discussant: **BASKARAN ANGATHEVAR**

## 2.12 AGRICULTURAL INNOVATION SYSTEMS 2

Room: 26b, Chair: **Chandra Sekhar Bahinipati**

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**SERGIO SALLES-FILHO, ADRIANA BIN, LUCIANA LENHARI:** "Agricultural research and innovation regional and global forums"

**SHEERAZ AHMAD ALAIE:** "Linking the agricultural innovation system and sustainability approach within horticulture sector of Kashmir valley"

**K J JOSEPH, LIYAN ZHANG:** "Interrogating agricultural innovation system from small farmers' perspective: China, India and implications for theory and policy"

Discussant: **YAMILA KABABE**

# Parallel Paper Sessions 3

Thursday, October 12, 10:40 – 12:10

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## **3.01 INNOVATION STUDIES, DIFFERENT APPROACHES AND METHODOLOGIES (INNOVATION INDICATORS)**

Room: 9, Chair: **Gabriela Dutrénit**

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**MICHIKO IIZUKA, HUGO HOLLANDERS:** "Innovation indicators: Towards a users' guide for developing countries"

**ATTILA HAVAS:** "Innovation indicators: Their relevance for assessing innovation performance, advancing theory development, and assisting policy formation"

**CRISTIANO SANTOS, EDUARDO VIOTTI, LUIZ RICARDO CAVALCANTE, ROBERTO DE PINHO, LEONARDO MATTOS DA COSTA:** "Dynamic and innovative enterprises: Is it possible to measure their contribution to the economy"

Discussant: **TILMAN ALTENBURG**

## **3.02 UNIVERSITY RELATIONSHIPS WITH INDUSTRY AND SOCIETY 2**

Room: 17, Chair: **Marisa dos Reis A. Botelho**

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**JUSTINA ADWOA ONUMAH, WILHEMINA QUAYE, GEORGE OWUSU ESSEGBEY, EDWARD DECKER:** "Spreading the "gospel" of science, technology and innovation research in Ghana: A two-case experience of the CSIR-science and technology policy research institute"

**EVANGELOS BOURELOS, MAUREEN MCKELVEY, OLOF ZARING:** "Universities and their involvement in industrial invention as seen through academic patents"

**CHARALAMPOS CHRYSOMALLIDIS, EVI SACHINI:** "The developmental university in the time of crisis. The case of Greece"

Discussant: **ESIN YORUK**

## **3.03 SCIENCE, TECHNOLOGY, INNOVATION POLICY AND DEVELOPMENT 5**

Room: *Central auditorium*, Chair: **Alexandros-Andreas Kyrtsis**

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**RODRIGO AROCENA:** "On power inequality, innovation systems and development strategies"

**AIMILIA PROTOGEROU, YANNIS CALOGHIROU, EVANGELOS SIOKAS:** "Thirty years of European collaboration in R&D: The role of FPs in research, technological development and innovation"

**ISABEL MARIA BODAS FREITAS, JOJO JACOB, LILI WANG, ZIBIAO LI:** "R&D offshoring and its effects on the innovation performance of Chinese firms"

Discussant: **SUSAN COZZENS**

### 3.04 SCIENCE, TECHNOLOGY, INNOVATION POLICY AND DEVELOPMENT 6

Room: 15, Chair: **Basudeb Chaudhuri**

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**ABDELRAZAQ SUYUTI NA-ALLAH, MAMMO MUCHIE:** "Innovation behaviour of manufacturing firms in Nigeria"

**SUJIT BHATTACHARYA:** "Learning lessons from Indian nanotechnology development"

**NIKOS VERNADAKIS:** "Innovation policy for the less developed economies: Lessons from the developed economies"

Discussant: **CLÉMENT BERT-ERBOUL**

### 3.05 INDIGENOUS KNOWLEDGE, INFORMAL SECTOR, INNOVATION AND DEVELOPMENT 2

Room: 20, Chair: **Erika Kraemer-Mbula**

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**ISABEL BORTAGARAY, JENNIFER RUST:** "What role for innovation in sustainable and inclusive water systems: An exploration of the recent policy trajectories in South Africa and Uruguay"

**GLENDA KRUSS, IL-HAAM PETERSEN:** "Promoting an innovation policy for inclusive development in South Africa"

**FOLARANMI DAPO BABALOLA:** "Effectiveness of indigenous beliefs as innovative strategy to conservation of natural resources in Nigeria"

Discussant: **EDWARD LORENZ**

### 3.06 NATIONAL, CONTINENTAL AND REGIONAL INNOVATION SYSTEM 2

Room: 27, Chair: **Bo Uno Goeransson**

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**NIKI GKOTSI, KLAS ERIC SODERQUIST:** "A systematic approach to studying support initiatives for innovation and entrepreneurship in a crisis economy"

**FERNANDA CIMINI SALLES, TULIO CHIARINI, MÁRCIA SIQUEIRA RAPINI, LEANDRO ALVES SILVA:** "Domestic businesses, multinationals and the state: An essay on the dynamics underpinning the 'low-innovation trap' in Brazil"

**EBRAHIM SOUZANCHI KASHANI:** "Evolution of NIS in a developing context: Historical study of the role of institutions in Iran"

Discussant: **CLAUDIA DE FUENTES**

### 3.07 SECTORAL INNOVATION SYSTEM, SYSTEMIC INDUSTRIAL POLICY AND DEVELOPMENT 3

Room: 19, Chair: **Aggelos Tsakanikas**

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**VERÓNICA ROBERT, LORENZO CASSINI:** "Opportunity vs. complex learning processes: Sectoral classification criteria based on technological regimes"

**NAZEEM MUSTAPHA, WILLIAM BLANKLEY, VAUGHAN LEIBERUM, JULIEN RUMBELOW, LWANDO KONDLO:** "R&D intensity and the classification of manufacturing technology in South Africa: An indigenous taxonomy"

**AKOIJAM AMITKUMAR:** "Solar energy sector in India: Exploring actors, knowledge production and innovation"

Discussant: **JEONG-DONG LEE**



### **3.08 INNOVATION SYSTEMS, NETWORKS, GLOBAL VALUE CHAINS AND FOREIGN DIRECT INVESTMENTS 3**

Room: 8, Chair: **Cristina Chaminade**

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**YUAN ZHOU, GUANNAN XU:** "The changing models of international technology transfer in China"

**ROMAN JUROWETZKI, RASMUS LEMA, BENGT-ÅKE LUNDVALL:** "Combining innovation systems and global value chains for development: Towards a research agenda"

**NIMITA PANDEY:** "Global innovation networks, regions and knowledge communities: A case of hyderabad biocluster in India"

Discussant: **SEMIH AKÇOMAK**

### **3.09 ENTREPRENEURSHIP AND INNOVATION MANAGEMENT 5**

Room: 26a, Chair: **Ioanna Sapfo Pepelasis**

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**QIANWEN GOU:** "Institutional complexity and corporate environmental strategy: Based on the institutional logic perspective"

**HANIFA BEG:** "Relationship of psychological characteristics with entrepreneurial intentions among secondary school students - A comparative study of Pathan and Chitrali communities"

**AYODELE IBRAHIM SHITTU:** "What determines entrepreneurial intention? - A comparative study of Nigerian and Chinese college students"

Discussant: **YASUSHI UEKI**

### **3.10 ENTREPRENEURSHIP AND INNOVATION MANAGEMENT 6**

Room: 1, Chair: **Panagiotis Panagiotopoulos**

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**NIKOS STELIOS KANELLOS, GEORGIOS SIOKAS:** "Knowledge-based entrepreneurship in Greek high-technology sectors: Myth and reality"

**MATHIAS BECK, CINDY LOPES-BENTO:** "Innovation outcomes and partner-type selection in R&D alliances: The role of simultaneous diversification and sequential adaptation"

**ROBERTO FONTANA, PAMELA ADAMS, FRANCO MALERBA:** "Knowledge resources, spinouts and exit through acquisition"

Discussant: **HIROKI IDOTA**

### **3.11 SCIENCE, TECHNOLOGY, INNOVATION AND SUSTAINABLE DEVELOPMENT GOALS 2**

Room: 6, Chair: **Mariela Bianco**

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**SHYAMA VENKATA RAMANI, EDUARDO URIAS:** "When access to drugs meets catch-up: Insights from the use of compulsory licensing threats to improve access to ARVS in Brazil"

**AMEL ATTOUR, AYERBE CECILE, NATHALIE LAZARIC, ATTOUCHI NARIMAN:** "Acceptance and resistance towards low-carbon mobility: Empirical results in Southern France for e-bikes adoption"

**IRMA BOOYENS:** "In search of local innovation networks in the south: Evidence from tourism firms in South Africa"

Discussant: **MARIA GABRIELA PODCAMENI**

### **3.12 AGRICULTURAL INNOVATION SYSTEMS 3**

Room: 26b Chair: **K J Joseph**

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**NAMRATA THAPA:** "Interaction of small growers with formal and informal institutional arrangements: Case of dissemination of knowledge in tea and natural rubber"

**ADEOLA OREOLUWA OLOYEDE:** "Determinants of agroforestry innovations adoption among small-scale farmers in Nigeria: An agricultural innovation system approach"

**CHANDRA SEKHAR BAHINIPATI, PK VISWANATHAN:** "Can wide scale diffusion of resource efficient technologies reduce groundwater utilization? Evidence from water scarce regions of Gujarat, India"

Discussant: **ABDENASSER MAAREF**

# Parallel Paper Sessions 4

Friday, October 13, 09:00 – 10:30

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## 4.01 INNOVATION STUDIES, DIFFERENT APPROACHES AND METHODOLOGIES 5

Room: 9, Chair: **Aimilia Protogerou**

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**JOSÉ MIGUEL NATERA MARÍN, GABRIELA DUTRÉNIT, SOLEDAD ROJAS, ALEXANDRE VERA-CRUZ:** "Using knowledge for better health: Building bridges between innovation studies and health disciplines"

**CECILIA TOMASSINI:** "Interaction networks in research projects: What they can tell us about the dynamics of knowledge production and its link with Brazil's health system"

**BRUNA FONSECA, PRISCILA ALBUQUERQUE, ED NOYONS, FABIO ZICKER:** "South-South collaboration on HIV/AIDS prevention and treatment: When birds of a feather rarely flock together"

Discussant: **ANASTASIA CONSTANTELOU**

## 4.02 UNIVERSITY RELATIONSHIPS WITH INDUSTRY AND SOCIETY 3

Room: 17, Chair: **Judith Sutz**

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**MARCO BELLANDI, ANNALISA CALOFFI:** "Combining universities third mission and place-based industrial development"

**VALERIYA VLASOVA, VITALIY ROUD:** "Empirical study of industry-science linkages in the Russian manufacturing sector"

**ERKAN ERDIL, HADI TOLGA GÖKSIDAN, BARIŞ ÇAKMUR:** "Catching-up and the role of university-industry collaboration in emerging economies: Case of Turkey"

Discussant: **CHARALAMPOS CHRYSOMALLIDIS**

## 4.03 SCIENCE, TECHNOLOGY, INNOVATION POLICY AND DEVELOPMENT 7

Room: *Central Auditorium*, Chair: **Rasmus Lema**

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**FREDERICO ROCHA:** "Procurement as innovation policy and its distinguishing effects according to firm size: The case of Brazilian oil and gas sector"

**ERKKI KARO:** "Emergence and organization of challenge and mission oriented STI policies in Japan and Taiwan"

**DAVID ELLIS KAPLAN:** "Policies to support high performance firms: A brief guide"

Discussant: **DINESH ABROL**

#### 4.04 INTELLECTUAL PROPERTY RIGHTS, OPEN INNOVATION AND DEVELOPMENT 2

Room: 15, Chair: Marina Szapiro

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CLÉMENT BERT-ERBOUL, JEAN CARLOS FERREIRA DOS SANTOS, NICHOLAS S. VONORTAS: "Open source foundations as social innovators in emerging economies: The case study in Brazil"

SARADINDU BHADURI, DEEP JYOTI FRANCIS, DEEPA V K: "The left's opposition to intellectual property rights: Gleaning insights from parliamentary debates in India and Portugal"

KEUN LEE, RAEYOON KANG, TAEHYUN JUNG: "Not patents but trademarks-based path of technological development: Evidence from the Korean data"

Discussant: KYRIAKOS DRIVAS

#### 4.05 INDIGENOUS KNOWLEDGE, INFORMAL SECTOR, INNOVATION AND DEVELOPMENT 3

Room: 20, Chair: Evangelos Siokas

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OLGA USTYUZHANTSEVA: "Innovation policy evolution: The Indian experience"

SUKHDEEP SINGH: "R&D spillovers and product market competition"

MIRABEL GODSWILL UKPABIO, TIMOTHY OYEDEPO OYEBISI, OWOLABI WILLIE SIYANBOLA: "Effects of innovation on performance of manufacturing SMEs in Nigeria: An empirical study"

Discussant: FOLARANMI DAPO BABALOLA

#### 4.06 NATIONAL, CONTINENTAL AND REGIONAL INNOVATION SYSTEM 3

Room: 27, Chair: Mika Raunio

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ISRAEL SANCHES MARCELLINO, MARCELO MATOS, MARIA MARTHA BRITO: "Subnational innovation policies in an adverse political an institutional landscape: The case of the innovation system of Rio de Janeiro, Brazil"

ANDREW ROBERTS CUMMINGS: "Emergence of territorial systems of innovation in El Salvador, Central America"

JANA SCHMUTZLER: "Bridging or bonding? A multilevel study on the effect of regional civic engagement in firms' innovation"

Discussant: ANDREW BODDAN TYLECOTE

#### 4.07 SECTORAL INNOVATION SYSTEM, SYSTEMIC INDUSTRIAL POLICY AND DEVELOPMENT 4

Room: 19, Chair: Jun Jin

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DAITIAN LI, GIANLUCA CAPONE, FRANCO MALERBA: "The long march to catch up: A history-friendly model of China's mobile communications industry"

SEMIH AKÇOMAK, SERKAN BÜRKEN: "Mid-tech trap: The case of automotive industry in Turkey"

MAHBUBEH NOURIZADEH, EBRAHIM SOUZANCHI KASHANI: "Elaborating the innovative behavior of low-medium-tech sectors in the context of a developing country: A comparison with high-medium-tech sectors based on Innovation Survey"

Discussant: TARMO LEMOLA

#### **4.08 INNOVATION SYSTEMS, NETWORKS, GLOBAL VALUE CHAINS AND FOREIGN DIRECT INVESTMENTS 4**

Room: 8, Chair: **Jorge Niosi**

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**RAJESH MANY:** "New Issues' in Innovation and Trade: A Study with Reference to Information Economy in India"

**RAPHIE KAPLINSKY:** "Do regulations and standards in global value chains support upgrading and the sustainable development goals?"

**BERNHARD TRUFFER, CHRISTIAN BINZ:** "Global innovation systems – A conceptual framework and typology from various cleantech industries"

Discussant: **XIAO-SHAN YAP**

#### **4.09 ENTREPRENEURSHIP AND INNOVATION MANAGEMENT 7**

Room: 26a, Chair: **Ana Urraca-Ruiz**

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**ANNEMARIE ØSTERGAARD:** "Innovation versus leadership in entrepreneurial growth"

**YANNIS CALOGHIROU, IOANNIS GIOTOPOULOS, ALEXANDRA KONTOLAIMOU, AGGELOS TSAKANIKAS:** "Drivers of high-growth firms: Strategic modes of growth and knowledge processing capabilities"

**MUHSIN DOGAN:** "Making innovative chemical giants: A firm-level analysis of IG Farben and DuPont"

Discussant: **ANTIGONE LYBERAKI**

#### **4.10 INNOVATION, FINANCIALIZATION AND THE GLOBAL CRISIS 1**

Room: 1, Chair: **Helena Lastres**

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**BEENA PULIKOTTILE LOUIS:** "Outward FDI, innovation strategies and cross-border M&As: Indian evidence"

**OLGA MIKHEEVA, RAINER KATTEL:** "The history of industrial finance in continental Europe and beyond: Towards ideal types of national development banks"

**MARC GUISLAIN HUMBERT:** "From development (1949) to still uneven development - An endeavour to track the history of an obvious mismatch"

Discussant: **RASIGAN MAHARAJH**

#### **4.11 SCIENCE, TECHNOLOGY, INNOVATION AND SUSTAINABLE DEVELOPMENT GOALS 3**

Room: 6, Chair: **Mika Kautonen**

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**MANJARI MANISHA:** "SDG-6 in India: Challenges and innovation for sustainable sanitation"

**JOSÉ IGNACIO PONCE SÁNCHEZ, GRACIELA CARRILLO GÓNZALEZ:** "Characteristics of national innovation systems in Latin America to transmit to knowledge-based bioeconomy"

**MAURICIO URIONA MALDONADO, CAROLINE RODRIGUES VAZ:** "The evolution of sustainability transitions and technological innovation systems research: A bibliometric analysis"

Discussant: **MICHAEL P. SCHLAILE**

# Parallel Paper Sessions 5

Friday, October 13, 12:10 –13:40

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## 5.01 INNOVATION STUDIES, DIFFERENT APPROACHES AND METHODOLOGIES 6 (INNOVATION INDICATORS)

Room: 9, Chair: **Martin Srholec**

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**HERNÁN ALEJANDRO MORERO, JORGE JOSÉ MOTTA, RUBÉN ASCUA:** "Measuring non-monetary innovation in firms. Cases from Free/Libre Open Source Software (FLOSS) firms of Argentina"

**ANA URRACA-RUIZ, PEDRO MIRANDA, VANESSA AVANCI:** "Measuring the technological coherence of environmental technologies with the industry knowledge base"

**TILMAN ALTENBURG, WILFRIED LÜTKENHORST:** "Anticipating future growth potentials - A policy-oriented consolidation of key methodologies"

Discussant: **IL-HAAM PETERSEN**

## 5.02 UNIVERSITY RELATIONSHIPS WITH INDUSTRY AND SOCIETY 4

Room: 17, Chair: **Glenda Kruss**

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**ANA LUCIA TATSCH, MARISA DOS REIS A. BOTELHO, JANAINA RUFFONI, LARA STUMPF HORN:** "The evolutionary nature of innovation in the health sector in developing countries: An analysis of the university-organisations collaboration in Rio Grande do Sul, Brazil"

**GEORGE TSEKOURAS, NICK MARSHALL, DESPINA KANELLOU:** "Connecting SMEs of low and medium innovation capability to research base: Challenges, enablers and supporting policies"

**YANNIS CALOGHIROU, AIMILIA PROTOGEROU, AGGELOS TSAKANIKAS, IOANNA KASTELLI:** "Fostering knowledge-intensive entrepreneurship in tertiary education: Empirical evidence from engineering schools in Greece"

Discussant: **ATTILA HAVAS**

## 5.03 SCIENCE, TECHNOLOGY, INNOVATION POLICY AND DEVELOPMENT 8

Room: *Central auditorium*, Chair: **Spyros Lioukas**

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**ALEXANDRE VERA-CRUZ, JOSÉ MIGUEL NATERA MARÍN, GABRIELA DUTRÉNIT, SOLEDAD ROJAS:** "There are sick people around the ivory tower: The financing strategy of diabetes research in Mexico"

**HELENA LASTRES, CRISTIANE GARCEZ, CRISTINA RIBEIRO LEMOS, WALSEY MAGALHÃES:** "The experience of the BNDES in supporting innovation and sustainable development and its perspectives in the XXI century"

**TASSOS GIANNITSIS, IOANNA KASTELLI:** "Linking technological and institutional change to industrial transformation in Greece"

Discussant: **MICHAEL KAHN**

## 5.04 INTELLECTUAL PROPERTY RIGHTS, OPEN INNOVATION AND DEVELOPMENT 3

Room: 15, Chair: Mario Scerri

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DEEP JYOTI FRANCIS, SARADINDU BHADURI: "Intellectual property rights, social values and economic performance: An econometric analysis"

VALÉRIA DELGADO BASTOS, JACOB FRENKEL: "Brazilian innovation paradox - Scientific production and patent performance"

BRITTO JORGE, RIBEIRO LEONARDO, LUCAS ARAÚJO, ALBUQUERQUE EDUARDO: "Knowledge flows, firms' competences and patent citations: The IBM's trajectory analysis"

Discussant: GABRIEL YOGUEL

## 5.05 INDIGENOUS KNOWLEDGE, INFORMAL SECTOR, INNOVATION AND DEVELOPMENT 4

Room: 20, Chair: José Cassiolato

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PHILOMENA CHIOMA-AKALUGO OGWUIKE, AMINOU AROUNA: "Quantitative assessment of farmers' ratings of technology characteristics and determinants of adoption in Senegal – case of rice threshing technologies"

ERIKA KRAEMER-MBULA, EDWARD LORENZ, LOTTA TAKALA-GREENISH, OLUSEYE OLADAYO JEGEDE, TUKUR GARBA, MUSAMBYA MUTAMBALA, TIMOTHY ESEMU: "Are African micro and small enterprises misunderstood? Unpacking the "soft" components of innovation"

BILLY ADEGBOLA OLUWALE, OLUSEYE OLADAYO JEGEDE, BLESSING FUNKE AJAO, EMMANUEL MAKANJUOLA OGUNJEMILUA: "Connecting the dots between knowledge openness, networking, partnerships and innovation within a cluster: Otigba Nigeria as a case study"

Discussant: EBRAHIM SOUZANCHI KASHANI

## 5.06 NATIONAL, CONTINENTAL AND REGIONAL INNOVATION SYSTEM 4

Room: 27, Chair: Jeong-Dong Lee

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DANILO SARTORELLO SPINOLA: "Economic cycles, productive structure and macroeconomic volatility: An empirical analysis (1950–2016)"

APOSTOLOS EFSTATHIOS VETSIKAS, YEORYIOS STAMBOULIS, MARIA MARKATOU: "Innovation and economic growth: An empirical investigation of European countries"

ANDREAS ATTALOGLOU, ANASTASIA CONSTANTELOU: "Analysis of the Greek reformation program 2007-2013 in terms of innovativeness and effectiveness"

Discussant: ANDREW ROBERTS CUMMINGS

## 5.07 SECTORAL INNOVATION SYSTEM, SYSTEMIC INDUSTRIAL POLICY AND DEVELOPMENT 5

Room: 19, Chair: Danae Diakoulaki

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MELISSA ARDANCHE, MARIELA BIANCO, SOLEDAD CONTRERAS, CLAUDIA COHANOFF, MARIA GONI, LUCIA SIMON: "The power of wind: An analysis of a Uruguayan dialogue regarding an energy policy"

MARIA GABRIELA PODCAMENI, JULIA MELLO QUEIROZ, CECÍLIA LUSTOSA: "Public policies as innovation drivers for the wind power sector"

MANISH KUMAR SINGH: "Global inter linkages and sectoral system of innovation"

Discussant: JUN JIN

## 5.08 INNOVATION SYSTEMS, NETWORKS, GLOBAL VALUE CHAINS AND FOREIGN DIRECT INVESTMENTS 5

Room: 8, Chair: **Frederico Rocha**

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**RICHARD WOOLLEY, NICOLAS ROBINSON-GARCÍA, RODRIGO COSTAS:** "Global research collaboration: Networks and partners in South-East Asia"

**ALEXANDRE DIAS, SÉRGIO KANNEBLEY:** "The interface between science and technology in research infrastructures"

**JOSEFINA SONNENBERG PALMIERI, ANA VALENTINA FERNANDEZ, HERNÁN ALEJANDRO MORERO:** "The international surveys of FLOSS (Free/Libre Open Source Software) firms"

Discussant: **ROBERTA RABELLOTTI**

## 5.09 ENTREPRENEURSHIP AND INNOVATION MANAGEMENT 8

Room: 26a, Chair: **Evangelos Bourellos**

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**PAULA ANDRÉA DO VALLE HAMBERGER, MARISA DOS REIS A. BOTELHO:** "Sectoral innovation patterns of small and medium-sized manufacturing firms: A Brazilian firm-level analysis"

**ANTIGONE LYBERAKI, PLATON TINIOS:** "The Greek crisis and small-scale production"

**MANUEL GONZALO, HUGO DANIEL KANTIS:** "Venture capital in India: A critical view from an evolutionary and systemic perspective"

Discussant: **QIAN WEN GOU**

## 5.10 CREATIVE INDUSTRIES AND SMART CITIES 1

Room: 1, Chair: **Marcelo Matos**

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**OLUWAYEMISI ADEBOLA OYEKUNLE, MAMMO MUCHIE:** "Creative industry and entrepreneurship for a sustainable economic development: Case of South Africa"

**JOSE BORELLO, LEANDRO RAMIRO GONZALEZ:** "Innovation in cultural and creative industries in semi-industrialized countries. Reflections based on the Argentinean case"

**WENZHUO WANG, YUCHUN SUN, ZHENTING XU, YIYING QU:** "A cross-level perspective on creativity: The role of learning goal orientation, work engagement, and organizational learning climate"

Discussant: **JEFFREY OROZCO**

## 5.11 SCIENCE, TECHNOLOGY, INNOVATION AND SUSTAINABLE DEVELOPMENT GOALS 4

Room: 6, Chair: **Isabel Salavisa**

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**RAINER WALZ:** "Innovations towards reaching natural resource related SDG – What are the starting positions?"

**DANIEL VILLAVICENCIO, FERNANDO DIAZ-LOPEZ, DIANA RIVERA:** "Barriers and incentives to eco-innovation in Mexico"

**MIKA KAUTONEN, MIKA RAUNIO, VEIKKO IKONEN, MIKA NIEMINEN, VIRPI OKSMAN:** "Matching the urban needs for inclusion, sustainability and local value creation by a systemic innovation?"

Discussant: **NATHALIE LAZARIC**



# Poster Session Presentations

Wednesday, October 11, 19:00 – 20:00

Room 1

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**SOHAN PRASAD SHA, VENNI V KRISHNA:** "Towards agricultural innovation system in Nepal: Drawing lessons from Thailand and Sri Lanka"

**OPEYEMI EYITAYO AYINDE, VICTOR IFEDOTUN AINA, MAMMO MUCHIE, KEHINDE OLANIYI ONILUDE:** "Sustaining agricultural credit innovation: A case study of the impact of the Agricultural Credit Guaranteed Scheme Fund (ACGSF) on livestock production in Nigeria (1978-2014)"

**PARFAIT YONGABO:** "Driving factors for research and innovation uptake in Rwanda: Current status and future perspectives"

**JULIO CÉSAR ZULUAGA:** "Novelty of technological innovation and spatial spillovers: An analysis of manufacturing firms"

**JOÃO MARCOS HAUSMANN TAVARES:** "The impacts of the international political and economic orders into the national systems of innovation: A tentative approach"

**RAJESH RAM MISHRA:** "Knowledge based economy and uneven development: A Marxian analysis of Indian IT industry"

**JU LIU:** "Internationalisation for technological capability building: From production to innovation"

**JAVIER JASSO, ARTURO TORRES-VARGAS:** "Entrepreneurial capabilities in the trajectory of two Mexican firms"

**FAYAZ AHMAD SHEIKH:** "Perspectives on informal sector innovations in India: Value theory revisited"

**YANG LI:** "The impact of domestic technology transfer on innovation capacity of high-tech industry: An analysis based on the technology transaction in China"

**OLUWAYEMISI ABISUGA OYEKUNLE, SWAPAN KUMAR PATRA, MAMMO MUCHIE:** "SMEs in sustainable development: Their role in poverty reduction and employment generation in Sub-Saharan Africa"

**CRISTIAN MARDONES, LUIS SEPULVEDA, PABLO CATALÁN:** "Public funding effects on inputs and outputs from the innovative process in Chilean firms"

**MASSIMILIANO FERRARA, ROBERTO MAVILIA, FRANCESCA LA ROSA:** "Inventive activity and knowledge flows in the Mediterranean area: A social network analysis based investigation approach"

**NADJA NORDLING:** "Platforms for innovation and development in regional economic development: A literature review and framework"

**SWATI MEHTA:** "Global value chains and Indian manufacturing industries: Pattern, determinants and policy perspective"

**YUEQI WANG:** "The contingent effect of absorptive capacity on open innovation search: The role of industrial competition"

**NAZIA TALAT:** "Technological change and sustainability in drinking water purification technologies at household level in Delhi (India)"

**KAUSIK CHAUDHURI, RAJESH RAJ SEETHAMMA NATARAJAN, SUBASH SASIDHARAN:** "Broadband adoption and firm performance: Evidence from informal sector firms in India"

**CALEB MUYIWA ADELOWO:** "Sources of technological learning among tenants of Nigeria's incubators"

**KEMI FUNMILAYO OMOTESHO, ISRAEL OGUNLADE, JOSEPH ADU:** "Multiplying agricultural extension advisory service providers for improved rice production in neglected rural communities: Lessons from Nigeria"

**SHAGUFTA HANEEF:** "The role of universities in education and research and the third mission in Pakistani innovation system, mapping the university system"

**ANDRE CHERUBINI ALVES, PAOLA RÜCKER SCHAEFFER, BRUNO FISCHER:** "Determinants of student entrepreneurship in Brazil: Systemic phenomenon or stochastic events?"

**GUILLERMO LÁZARO ANDRÉS ALPÍZAR:** "University-industry linkages in Cuba. Foundations for developing an agent based model"

**MARCELA AMARO, ALBERTO MORALES, FEDERICO STEZANO:** "Technological trends in the biotechnology sector: Patent analysis in Mexico and the United States"

**OLUSEYE OLADAYO JEGEDE, BILLY ADEGBOLA OLUWALE, BLESSING FUNKE AJAO, EMMANUEL MAKANJUOLA OGUNJEMILUA:** "Economy of Clustering, Innovation and Scaling-up: An analysis of West Africa's Silicon Valley"

# Book Presentations

Wednesday, October 11, 18:00 – 19:00

*Central Auditorium*

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Chair: **RIGAS ARVANITIS**

(Laboratory of Excellence, Institute for Research and Innovation in Society)

**DIRK MEISSNER, ERKAN ERDIL, JOANNA CHATAWAY** (eds). "Innovation and the Entrepreneurial University", Springer, Forthcoming, 2018.

**CRISTINA CHAMINADE, BENGT-ÅKE LUNDVALL, SHAGUFTA HANEEF**. "Advanced Introduction to National Innovation Systems", Edward Elgar Publishing, Forthcoming, 2018.

**FRANCO MALERBA, YANNIS CALOGHIROU, MAUREEN MCKELVEY, SLAVO RADOŠEVIĆ** (eds). "Dynamics of Knowledge Intensive Entrepreneurship: Business Strategy and Public Policy", Routledge, 2016.

**MARIO SCERRI** (ed). "The Emergence of Systems of Innovation in South(ern) Africa: Long Histories and Contemporary Debates", MAPUNGUBWE Institute for Strategic Reflection, December 2016.

**FRANCO MALERBA, SUNIL MANI, PAMELA ADAMS** (eds). "The Rise to Market Leadership: New Leading Firms from Emerging Countries", Edward Elgar Publishing, 2017.

**TILMAN ALTENBURG, CLAUDIA ASSMANN** (eds). "Green Industrial Policy: Concept, Policies, Country Experiences", Deutsches Institut für Entwicklungspolitik / German Development Institute (DIE) with Partnership for Action on Green Economy (PAGE), Forthcoming, November 2017.

**FRANCO MALERBA, RICHARD NELSON, LUIGI ORSENIGO, SIDNEY WINTER** (eds). "Innovation and the Evolution of Industries: History-Friendly Models", Cambridge University Press, 2016.

**ALEXANDRA TSVETKOVA, JANA SCHMUTZLER, MARCELA SUAREZ, ALESSANDRA FAGGIAN** (eds). "Innovation in Developing and Transition Countries", Edward Elgar Publishing, 2017.

**MAMMO MUCHIE, ANGATHEVAR BASKARAN** (eds). "Sectoral Innovation Systems in Africa", Africa World Press, Trenton, New Jersey, USA, 2017.

**MAMMO MUCHIE, ANGATHEVAR BASKARAN** (eds). "African Economic Transformation on the Digital Age", Africa World Press, Trenton, New Jersey, USA, 2017.

**MAMMO MUCHIE, ANGATHEVAR BASKARAN** (eds). "Education, Human Capital and Research Capacity for African Integrated Sustainable Development", Africa World Press, Trenton, New Jersey, USA, 2017.

**MAMMO MUCHIE, ANGATHEVAR BASKARAN** (eds). "Solutions to Access Safe and Drinking Water in Africa", Africa World Press, Trenton, New Jersey, USA, 2017.

**RODRIGO AROCENA, BO GÖRANSSON, JUDITH SUTZ**. "Developmental Universities in Inclusive Innovation Systems. Alternatives for Knowledge Democratization in the Global South", Palgrave Macmillan, Forthcoming, 2018.

# Local Industry Panel

## **“The Greek productive system in the post crisis era: A pattern for an effective transformation through innovation and sustainable development”**

Friday, October 13, 16:15 – 17:45

*Central Auditorium*

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Chair: **AGGELOS TSAKANIKAS**

(Laboratory of Industrial and Energy Economics, National Technical University of Athens)

### **Panel participants:**

- ELKEME, Hellenic Research Centre for Metals S.A. (member of the Viohalco Group)
- Korres SA Natural Products
- HELLENIC PETROLEUM
- TITAN Cement Company SA
- SEVT, Federation of Hellenic Food Industry
- Ericsson Hellas SA
- Eurobank

In the midst of the economic crisis and in a quest for a new growth pattern for Greece, the role of the private sector and the institutional set up is decisive for an effective transformation of the local business dynamics. Greece needs to enrich its entrepreneurial capacity with firms that are capable to compete in international markets that invest in innovation and manage to produce differentiated products / services that attract foreign demand. A round table of representatives from major Greek companies that have managed to develop a sustainable business model, will discuss:

- A possible roadmap to “innovate out of the crisis”
- “Lessons learnt” policy message
- The role of university – industry relationship,
- Actions, means and mechanisms to further enhance a new growth pattern model:

Globelics international community will have the opportunity to understand the local dynamics and the decisive role of innovation in such a transformation. Feedback from the Globelics community could provide some fruitful insights, allowing us to reach to some concrete guidelines and policy implications.

# Globelics Start-up Event

Friday, October 13, 18:45 – 20:45

*Room 15*

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The closing of the conference will mark the launch of an open-event for innovative entrepreneurship in Greece. The Globelics Startup Event aims to mobilise the wider Greek start-ups ecosystem and attract participants who are interested in issues related to entrepreneurial activity and innovation.

The event will include a panel discussion focusing on how the local innovation and entrepreneurship ecosystem can be supported and further developed in order to nurture and strengthen innovative and sustainable business models. More specifically, the discussion will be organised in three thematic rounds: (a) current status of the start-up ecosystem; (b) schemes and mechanisms to support new business ventures; and (c) new possibilities for financing and extroversion.

The event will be attended by young entrepreneurs, executives from international organizations, academics, as well as representatives from start-up funding schemes. Discussion will be also fed from the Globelics community in order to produce fruitful ideas and useful lessons from international practice.

# Social Program

## Cultural Events

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Conference participants and their accompanying guests are welcome to participate in the guided tours organised on the second day of the conference. Shuttle bus transfer from the conference venue and to the Gala dinner venue is included.

### Guided Tour 1: New Acropolis Museum

Thursday, October 12, 17:15 – 18:45

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Registration required for conference participants and their accompanying guests. Please bring your conference badge that is marked with a **blue post**.

The museum was inaugurated in 2009 and is located opposite of the Acropolis itself. Archaic and classical finds from the Acropolis site are displayed here. The visitor progresses gradually upward through the building, where on the top floor, the marble frieze that once ran around the top of the Parthenon await. The visit includes: a) the permanent exhibition, and b) the very interesting temporary exhibition “emotions” which sheds light on the unseen world of emotions in the personal, social and political life of antiquity.

**Meeting point:** Outside the Central Auditorium of the Conference Venue at 16:15. Conference participants or accompanying guests that will come at the cultural event on their own, must join the main group at the entrance of the museum at 17:00.

### Guided Tour 2: National Archaeological Museum of Athens

Thursday, October 12, 17:15 – 18:45

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Registration required for conference participants and their accompanying guests. Please bring your conference badge that is marked with a **red post**.

The museum has more than 11.000 exhibits and offers a panoramic experience of the Greek civilization from prehistory to late antiquity. Numerous galleries

house five large permanent collections: a) the Prehistoric Antiquities, b) the Sculptures Collection, c) the Vase and Minor Arts, d) the Bronze Collection, and e) the only Egyptian and Near Eastern Antiquities Collection in Greece. The conference participants will be guided in all five collections as well as in the new temporary exhibition “Odysseys”, which is the main commemorative event on the occasion of the 150th anniversary since the foundation of the Museum.

**Meeting point:** Outside the Central Auditorium of the Conference Venue at 16:15. The conference participants or accompanying guests that will come at the cultural event on their own, must join the main group at the entrance of the museum at 17:00.

### Guided Tour 3: Stavros Niarchos Foundation Cultural Center (SNFCC)

Thursday, October 12, 17:15 – 18:45

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Registration required for conference participants and their accompanying guests. Please bring your conference badge that is marked with an **orange post**.

The Stavros Niarchos Foundation Cultural Center (SNFCC) is a sustainable, world-class cultural, educational and recreational urban complex that is built on the edge of the Faliro Bay and includes three main



facilities: a) The new National Library of Greece, b) The new Greek National Opera, and c) The Stavros Niarchos Park. The conference participants will be guided in all the three main facilities of the complex. The SNFCC is one of the world's most sustainable building complexes of its size. In November 2016, the SNFCC achieved the highest and most stringent

international standard for sustainable design and construction - the Platinum LEED – for its innovative architecture and green technology.

**Meeting point:** *Outside the Central Auditorium of the Conference Venue at 16:15. Conference participants or accompanying guests that will come at the cultural event on their own, must join the main group at the entrance of the SNFCC main buildings at 17:00.*

## Guided Walk: Sites of historic and cultural interest in the centre of Athens

Thursday, October 12, 17:15 – 18:45



Registration required for conference participants and their accompanying guests. Please bring your conference badge that is marked with a **green post**.

The first part of the event (20 min.) regards a guided tour by bus of the most historic buildings and squares in Athens' city centre, i.e. Panathenaic Stadium, the House of the Greek Parliament, Syntagma Square, the so-called Athens Trilogy etc. The second part (1 h) includes a guided walk through Plaka, with the picturesque neoclassical houses and pedestrian streets, the Ancient Roman Forum (Agora), Monastiraki Square, and the pedestrian street "Adrianou" with the wonderful view to Acropolis, to the Ancient Greek Forum (Agora) and to the ancient temple of Hephaestus at Thesseio area, which is the end point of the walk. Please wear shoes appropriate for walking.

**Meeting point:** *Outside the Central Auditorium of the Conference Venue at 16:15. The conference participants or accompanying guests that will come at the cultural event on their own, must join the main group at 17:00 at the starting point of the tour i.e. just opposite Panathenaic Stadium (Kallimarmaro).*

## Gala Dinner

Thursday, October, 12, 20:30 – 24:00



Registration required for conference participants and their accompanying guests. Please bring your **conference badge** received at conference registration.

The gala dinner is sponsored by Latsis Public Benefit Foundation. It will be held at "Ecali club", the first country club in Greece, which is located in the northern suburbs of Athens. During the dinner there will be a welcome speech by the Mayor of Athens. The three best papers written by PhD students will be announced by the Globelics Scientific Board. Enjoy the relaxing atmosphere of the club accompanied with nice Greek food, music and dancing.

**Venue Address:** 15, Lofou str., Ecali 14578.

# List of Participants

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# Conference Contributors

## **Conference Reviewers**

The 15th Globelics Conference in Athens has received 495 full paper submissions of which almost 200 have been selected for oral and poster presentation. The selection process was based on a double blind peer review by more than 300 scholars focusing on relevance, academic quality and originality. The review corps is essential to the Globelics Community. The Committees of the 15th Globelics Conference are grateful for the contribution of scholars that have dedicated their valuable time and supported our community.

We hope that the Globelics reviewers will continue their engagement in the Globelics community and will contribute to the reviewing process of upcoming events. A list of the Globelics reviewers is available at [www.globelics.org](http://www.globelics.org).

## **Community of Volunteers**

In the context of the 15th Globelics Conference, a large community of volunteers was set up to provide multi-level support for the activities that will take place during the three-day conference. The volunteer community includes under-graduate and postgraduate students, PhD candidates and graduates from 9 different Higher Education Institutions across the country, with more than 120 active members. In this effort, allies and supporters are also the established initiatives of students based in the NTUA and other institutions.



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# Guidelines for Oral and Poster Presentations

## **Guidelines for paper presenters**

Each parallel session normally includes three papers and lasts 90 minutes. Time allowing, the paper presenters should highlight one or two issues from the other papers presented in the session of particular relevance to their own work. A discussant will subsequently comment on all papers presented in the session. The discussion then continues in plenary.

The standard time schedule looks like this:

- Introduction = 5 minutes
- First paper presentation by the author = 15 minutes
- Second paper presentation by the author = 15 minutes
- Third paper presentation by the author = 15 minutes
- Discussant of all three papers = 15 minutes
- General discussion and replies from the authors = approximately 25 minutes.

Projectors will be available for PowerPoint presentations. We recommend that presenters bring their presentation on a USB memory device.

## **Guidelines for poster presenters**

Poster presenters will prepare a display of their work using an A0 paper size (84 cm wide × 119 cm tall). Presenters must be available for presenting their work and answering questions during the poster session.

Ideally, a poster will provide information on:

- Title of the paper
- Name and affiliation of author(s)
- Aim of the paper
- Presentation of theoretical framework
- Presentation of data (if empirical paper)
- Presentation of main findings and implications
- Main references

The posters are intended to grab attention and quickly communicate the ideas and relevance of papers presented. The use of graphics and colours is encouraged as well as the use of large fonts. To the extent possible, hard copies of the paper will be available for interested colleagues.

Boards to put up the posters will be available in the poster room. Globelics Students/volunteers will help presenters hang their posters.



## The Antikythera mechanism

The Antikythera mechanism is part of the logo of the 15th Globelics Conference in Athens. It is an ancient analogue computer and orrery used to predict astronomical positions and eclipses for calendrical and astrological purposes. Recovered in 1901 from the Antikythera shipwreck off the Greek island of Antikythera, it is believed to have been designed and constructed by Greek scientists. All known fragments of the Antikythera mechanism are kept at the National Archaeological Museum, in Athens. After the knowledge of this technology was lost at some point in antiquity, technological artefacts approaching its complexity and workmanship did not appear again until the development of mechanical astronomical clocks in Europe in the 14th century.



# Notes

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# Notes

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## Practical Information



SSID: NCSR DEMOKRITOS  
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- Globelics (@Globelics) (<https://www.facebook.com/Globelics-150732818425442/>)
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- @Globelics (<https://twitter.com/Globelics?s=07>)
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- 15thglobelicsintconf  
<https://instagram.com/15thglobelicsintconf>



**15<sup>th</sup>**  
Globelics  
International Conference  
11-13 October 2017 | Athens | Greece



- Official website  
<http://liee.ntua.gr/globelics2017/>



Conference App: Conference4me

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Download the free conference app “Conference4me” and get access to the up-to-date programme, practical information, venue plan, and much more. The app does not require constant internet connection and is available for iOS, Android, Windows Phone and Amazon devices.




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# Conference Centre of the N.C.S.R. "Demokritos"



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