18<sup>th</sup> Annual International Conference on

# Real Options Theory Meets Practice

Organized by Real Options Group and EAFIT University

In cooperation with King's College London Northwestern University and University of California at Los Angeles

> July 23 - 26, 2014 Medellin, Colombia

# **Program Sessions Summary Guide**

### DAY 1 - THURSDAY, JULY 24

[9:00-12:00 Registration & Free Tutorials]		
12:00-1:45 Luncheon		
1:45-2:00 President's Welcome		
2:00-3.40 Empirical Evidence & Valuation Applications (4)		
4:10-5:00 Keynote Address		
5:00-6:00 Panel Discussion		
6:00-7:15 Networking Reception		

### DAY 2 - FRIDAY, JULY 25

Track I	Track II
9:00-10:15	9:00-10:15
Natural Resources & Energy (3)	Theoretical Issues (3)
10:45-12:00	10.45-12:00
Various Simulation Applications (3)	R&D and Learning Investments (3)
12:00-2:00 Luncheon	
2:00-3:15	2:00-3:15
Strategic Perspectives (3)	Competitive Games & Incomplete Info (3)
3:45-5:00	3:45-5:00
Environmental Investment & Policy (3)	Best Student Paper Award Session (4)

### SATURDAY, JULY 26

Day tour/ sightseeing.

# **Program Sessions**

## DAY 1 - THURSDAY, JULY 24

9:00-10:00 Registration

[9:00 - 12:00 Free Tutorials (optional) -part of Managerial Program]

**9:00 – 9:45 Valuing Real Options Using Binomial Trees** L. Trigeorgis (U. of Cyprus and King's College London, UK)

**9:45 – 10:30 Valuing Real Options Using Simulation** L.E. Brandão (PUC-Rio, Brazil)

10:30 - 11:10 Morning Coffee Break

**11:10 – 11:55 Case Studies Using Binomial Trees and Simulation** Marco A.G. Dias (Petrobras, Brazil)

12:00 - 1:45 Luncheon

## DAY 1 – THURSDAY, JULY 24 (continued)

#### 1:45 – 2:00 President's Welcome

#### 2:00 – 3:40 Empirical Evidence & Valuation Applications

Chairperson: L. Trigeorgis (U. of Cyprus and King's College London, UK)

O. Miranda and L.E. Brandão (PUC-Rio, Brazil), Project and Firm Valuation in Mining Exploration: An Application in Peru

E. Navarrete (U. de la Frontera, Chile), Optimal Harvest Policies: An Application to Pine Harvesting in Chile

L. Del Viva (ESADE Business School, Spain), E. Kasanen (Aalto U., Finland) and L. Trigeorgis (U. of Cyprus and King's College London, UK), *Real Options and Determinants of Idiosyncratic Skewness* 

L. Trigeorgis (U. of Cyprus and King's College London, UK), N. Lambertides (Cyprus U. of Technology) and L. Del Viva (ESADE Business School, Spain), *The Impact of Growth Options and Distress Risk on Stock Returns* 

#### 3:40 – 4:10 Afternoon Coffee Break

#### 4:10 – 5:00 Keynote Address

M.A.G. Dias (Petrobras and PUC-Rio, Brazil), Application of Real Options in Petroleum & Energy

**5:00 – 6:00 Panel Discussion Real Options Application: Successes and Impediments** *Moderator: Cecilia Maya Ochoa (CFO XM, Colombia)* 

#### **Panelists Include:**

Luiz Brandão (PUC-Rio, Brazil) Marco A.G. Dias (Petrobras, Brazil) Luis Hernandez Alburquerque (Leadership and Strategy Group, Colombia) Luis Alfredo Mogollon (Ecopetrol, Colombia) Lenos Trigeorgis (ROG, U. Cyprus and King's College London, UK)

6:00 – 7:15 Networking Reception Sponsored by ROG and EAFIT University

## DAY 2 – FRIDAY, JULY 25

#### 9:00 – 10:15 I. Natural Resources & Energy Chaintenson: M. 4 C. Dias (Potrolar)

Chairperson: M.A.G. Dias (Petrobras, Brazil)

R. Igrejas, L. Lima Gomez and L.E. Brandão (PUC-Rio, Brazil), Valuing Flexibility in Bilateral Power Purchase Contracts: An Application to Electricity Markets in Brazil

X. Qiu, Z. Wang and X. Qing (China U. of Petroleum at Beijing, China), Investment in Deep-water Oil & Gas Exploration Projects: A Multi-factor Analysis

S. Cabrales and R. Bautista (U. de los Andes, Colombia), Valuation of Nonrenewable Resources with Endogenous Costs: A Mature Oil Well in Colombia

#### **II.** Theoretical Issues

Chairperson: A. Welling (Otto-von-Guericke U., Germany)

A. Welling, E. Lukas and S. Kupfer (Otto-von-Guericke U. Magdeburg, Germany), *On the Investment-Uncertainty Relationship* 

G. Diaz-Hoyos (Ecopetrol,) and I. Velez-Pareja (Master Consultores, Colombia), *Tax Savings Valuation with Appropriate Risk Profile as Contingent Claims* 

J. Kinnunen (Åbo Akademi U., Finland) and I. Georgescu (Academy of Economic Studies, Romania), *Clustering Analysis and Financial Ratios Using Self-Organizing Map* 

#### 10:15 - 10:45 Morning Coffee Break

10:45 – 12:00 I. Various Applications using Simulation Chairperson: A. Mora-Valencia (EAFIT U., Colombia)

R. Rodrigues, L. Ozorio, C. Bastian-Pinto (IBMEC Business School), and L.E. Brandão (PUC-Rio, Brazil), Valuing the Flexibility of Switching Outputs in a Fertilizer Plant

D. Podhraski (Institut for Public-Private Partnership, Slovenia) and Ales Berk (U. of Ljubljana, Slovenia), *Valuing Path-dependent Project-financed Public-Private Partnerships* 

V. Cohen Uller (Petrobras), C. Bastian-Pinto and L. Ozorio (IBMEC Business School, Brazil), *Contractual Options on Marker Oil Spreads* 

#### II. R&D and Learning Investments

Chairperson: L. Ozorio (IBMEC Business School, Brazil)

G. Fernandes, F. Perobelli (Federal U. of Juiz de Fora (UFJF)), R. Igrejas and L.E. Brandão (PUC-Rio, Brazil), *Evaluation of an R&D Project* 

L. Delaney (City University London, UK), *Investment Timing under Development-cost* Uncertainty and Time-to-Build

L. de Magalhaes Calvette, M.A.C. Pacheco and M.A.G. Dias (Petrobras and PUC-Rio, Brazil), *Optimal Sequencing of Oil Exploratory Prospects with Learning and Genetic Algorithms* 

12:00 - 2:00 Luncheon

#### 2:00 – 3:15 I. Strategic Perspectives Chairperson: A. Sakhartov (Wharton School, U. of Pennsylvania, USA)

M. Brady (Dublin City U., Ireland), Temporary Employment Contracts and the Strategic Use of Real Options

A. Sakhartov (Wharton School, U. of Pennsylvania), *Company Acquisition and Resource Redeployability in New Product Markets* 

D.C. Restrepo Ochoa, R. Correia, J.I. Peña (U. Carlos III de Madrid, Spain) and J. Poblacion (Bank of Spain), *Expropriation Risk and Investment Decisions* 

#### **II.** Competitive Games and Incomplete Information

Chairperson: C. Bastian-Pinto (IBMEC Business School, Brazil)

N. Huberts, K. Huisman, P. Kort (Tilburg U., Netherlands) and H. Dawid (Bielefeld U., Germany), *Firm Size, Capacity and Innovative Investment in an Established Market* 

M. Lavrutich, K. Huisman and P. Kort (Tilburg U., Netherlands), Capacity Choice and Investment Hysteresis Caused by Hidden Competition in a Duopoly

T. Fagart (U. Paris 1, France), Markovian Equilibrium Investment Under Imperfect Competition

#### 3:15 – 3:45 Afternoon Coffee Break

#### 3:45 – 5:00 I. Environmental Investment & Policy

Chairperson: S.V. von Helfenstein (Value Analytics & Design, USA)

S.V. von Helfenstein (Value Analytics & Design, USA), Rethinking C&D Waste and Flexibility in Systems Design

A. Welling, E. Lukas and S. Kupfer (Otto-von-Guericke U. Magdeburg, Germany), *Optimal Timing of Green Investment under Regime Switching and Political Ambiguity* 

M. Shahnazari, A. McHugh, J. Whale (Murdoch U.) and B. Maybee (Curtin U., Australia), *Power Investment Decisions with Carbon Policy Uncertainty: The Impact of Regulation Repeal and Reinstatement* 

#### II. Best Student Paper Award Session

Chairperson: L.E. Brandão (PUC-Rio, Brazil)

D. Owatemi (U. of Strathclyde, UK), Investment with Incomplete Information, Flexibility and Demand Uncertainty

C. Justin and D. Mavris (Georgia Institute of Technology, USA), Valuing Aircraft Development Strategies: An Application with Performance Improvement Packages

G. Siegert (HHL Leipzig Graduate School of Economics, Germany), Renewable Energy Subsidies: Costs, Benefits and Security of Supply in Bio-Electricity Feed-in Tariffs

5:00 Delivery of Best Student Paper Award & Conference Participant Certificates Closing Remarks/ Conference Concludes

# About the Conference

#### Venue

The conference will be hosted at EAFIT University, address Carrera 49 # 7-Sur 50, in Medellin, Colombia.

### Fees & Registration

Registration fees for all participants (academic or corporate) are Euro 420 or US\$575 if paid by April 7 and include attendance at both the managerial and the academic parts of the conference; please register via the conference website <u>www.realoptions.org</u> Registration fees go up by 20% after April 7 (to Euro 500 or \$685 thereafter).

#### **Important Administrative Information**

Registration fees include the conference proceedings and other materials, lunches, coffee breaks, reception and bus tour on Saturday. Cancellations made in writing by June 1 can be refunded, except for a 15% service charge. Those not attending or canceling after June 1 are responsible for the whole fee. The organizers reserve the right to make changes to the program without notice. Only registrations paid by April 7 are guaranteed to be confirmed and be included on the official list of participants. For information on registration and other general-type conference-related inquiries contact Eugenia (tel +357 22893605; fax +357 22895030; e-mail conference.registration@realoptions.org).

For information on local logistics, EAFIT University, Medellin or Colombia contact Maria Paola Roldan, tel: 57 4 2619500 ext.9601; e-mail: mroldan5@eafit.edu.co.

#### Venue Hotel, Airport/Transport, Visas

The recommended hotel close to the venue and of international quality standards is Sheraton Four Points, adjacent to El Poblado, the safest and most exclusive area of Medellin, close to quality shopping centers and numerous restaurants (1 min walk from Oviedo Mall). Jose Maria Cordova (JMC) international airport is located in the municipality of Rionegro, 40 km (15 miles) and about 45 minutes from Medellin. There are three hubs for international air connections (through Bogota, Lima and Panama), with direct flights to the US (New York, Miami and Ft. Lauderdale). Flights from Europe can initiate from Frankfurt, Paris, Madrid (and London via the US). A local airport within the city of Medellin, Olaya Herrera Airport (OH), serves mainly domestic/national flights. The cost of a taxi service in the Medellin area starts at US\$2.50 and runs \$12 an hour. Medellin has a modern, integrated railway and transportation system. More info can be found at the conference website (under venue).

Regarding VISA, please first check if your nation is one of 95 jurisdictions that do not require a visa to enter Colombia: <u>http://en.wikipedia.org/wiki/Visa policy of Colombia</u> If a visa is required, EAFIT University will provide you with an invitation letter that you should print and show to the Colombian immigration authorities at the airport so they stamp in your passport the temporary visitor stamp (PIP-6) which allows you to develop activities with the University; at the time you arrive at the University, EAFIT should take a copy of this stamp. To provide you with the PIP-6 letter, you will need to provide the university your relevant info (Name, Passport Number, Nationality, Email).

For more detailed info or to register for the conference see www.realoptions.org